REPORT RESUMES

ED 016 102 VT 004 065

A PERSONAL ADJUSTMENT AND PRE-VOCATIONAL CENTER FOR NON-FEASIBLE DEAF ADULTS AND RESEARCH TO DISCOVER AND ESTABLISH--(1) THE EXTENT TO WHICH VOCATIONAL REHABILITATION CAN BE ACHIEVED, (2) THE TIME REQUIRED, AND (3) THE COST. FINAL PROJECT REPORT.

BY- RETHERFORD, ROBERT M.
MICHIGAN ASSN. FOR BETTER HEARING, EAST LANSING
PUB DATE 65

EDRS PRICE MF-$0.75 HC-$7.68 190P.

DESCRIPTORS- *VOCATIONAL REHABILITATION, *DEAF, SOCIAL ADJUSTMENT, *PREVOCATIONAL EDUCATION, DEMONSTRATION PROJECTS, *PROGRAM DEVELOPMENT, MEDICAL EVALUATION, PSYCHOLOGICAL EVALUATION, ADMISSION CRITERIA, JOB PLACEMENT, PROGRAM COSTS, *ADJUSTMENT (TO ENVIRONMENT), ADULT BASIC EDUCATION, VOCATIONAL TRAINING CENTERS, VOCATIONAL ADJUSTMENT, TEST RESULTS, COMMUNICATION SKILLS, INDIVIDUAL CHARACTERISTICS,

DEAF MEN WHOSE HANDICAPS WERE BEYOND THE SCOPE OF AVAILABLE STATE SERVICES WERE ENROLLED IN A PROGRAM TO DEVELOP READINESS FOR VOCATIONAL REHABILITATION. THE 33 TRAINEES WERE GIVEN INSTRUCTION IN COMMUNICATION, READING, SOCIAL STUDIES, ARITHMETIC, SOCIAL ADJUSTMENT, OCCUPATIONAL TRAINING, DRIVER EDUCATION, AND PREEMPLOYMENT TRAINING. TRADITIONAL CLASSROOM TEACHING TECHNIQUES WERE USED. THE SMALL SIZE OF THE TRAINEE SAMPLE, THE INADEQUACY OF INFORMATION ABOUT THE DEAF CLIENTS, AND THE LACK OF RELEVANT NORMATIVE DATA SHOULD BE CONSIDERED IN CONNECTION WITH THE FOLLOWING FINDINGS--(1) THE MAJORITY OF TRAINEES OBTAINED SOME TYPE OF EMPLOYMENT, (2) EVIDENTLY MOST OF THE MEN REACHED A LEARNING PLATEAU IN THE SIXTH AND EIGHTH MONTHS OF TRAINING, (3) ALTHOUGH ACADEMIC SKILL IMPROVED LITTLE, THERE WAS EVIDENCE THAT EXPOSURE TO FORMAL INSTRUCTION BROADENED COMMUNICATION SKILLS AND MADE POSSIBLE MORE CONTACT WITH OTHER TRAINEES AS WELL AS WITH OTHER DEAF OUTSIDE, AND (4) THE 33 MEN SPENT AN AVERAGE OF 368.2 DAYS IN TRAINING AT AN AVERAGE COST OF APPROXIMATELY $10,250 PER MAN PER YEAR. IT WAS RECOMMENDED THAT FUTURE RESEARCH FOCUS ON TWO DISTINCT BUT HIGHLY RELATED AREAS OF DEFICIENCY IN THE UNDERPRIVILEGED DEAF, LITERACY AND COMMUNICATIVE ABILITY, AND PSYCHOLOGICAL ADJUSTMENT. TRAINEE SELECTION AND EVALUATION METHODS, PROGRAM FACILITIES AND CONTENT, PLACEMENT ACTIVITIES, AND TABLES OF TRAINEE INFORMATION ARE INCLUDED. (JK)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

VT 004 065

ED016102

A PERSONAL ADJUSTMENT AND PRE-VOCATIONAL CENTER FOR NON-FEASIBLE DEAF ADULTS AND RESEARCH TO DISCOVER AND ESTABLISH: 1) THE EXTENT TO WHICH VOCATIONAL REHABILITATION CAN BE ACHIEVED, 2) THE TIME REQUIRED, AND 3) THE COST.

FINAL PROJECT REPORT

CONDUCTED BY

MICHIGAN ASSOCIATION FOR BETTER HEARING
EAST LANSING, MICHIGAN

Project Director:

Stahl Butler, Executive Director
Michigan Association for Better Hearing

Principal Investigator:

Robert M. Retherford, Research Psychologist

This research and demonstration project was supported, in part, by a research and demonstration grant (Number R.D.-801S) from the Vocational Rehabilitation Administration, Department of Health, Education and Welfare

ACKNOWLEDGEMENTS

This project is the product of the drive and persistance of a number of individuals who believed that deafness, and some of its resultant complications, need not relegate a multiple-handicapped deaf individual to a useless position in life.

This work would not have been possible without major financial support from the Vocational Rehabilitation Administration, Department of Health, Education and Welfare and additional support from the Michigan United Fund, through the Michigan Association for Better Hearing.

Special recognition and thanks must be directed to Dr. George Lavos, psychologist, now assistant principal at the Michigan School for the Deaf, for his untiring contribution of time and advice in the writing of the project proposal.

Also, because of his early interest, technical advice, and contribution to the original proposal, Dr. Howard Ray of Gallaudet College, Washington, D.C., deserves special thanks.

Living facilities, an important and indispensable component of our program, were furnished by the Y.M.C.A. of Lansing, Michigan. This portion of the Center program could not have succeeded had it not been for the sympathy and patient understanding of Mr. Earl T. Cruthis, Associate General Secretary of the Lansing Y.M.C.A. and Mrs. Dorothy Hannah, Resident Secretary, and their able staff. They removed a great burden from our shoulders.

In late 1964, research funds were obtained for part-time employment of students from Michigan State University as research assistants. We are, therefore, indebted to Misses: Sondra Case, Dorothy Jacobs, Margaret Gibbs, Elaine Beck, Barbara Drysdale, Martha Leuhrs and Elizabeth Force, for their devotion to responsibility and skilled contribution on behalf of the research.

A special note of thanks is offered to Dr. Herbert J. Oyer, Professor, Research Chairman and Consultatnt in Audiology and Speech; Director of Speech and Hearing Clinic, Michigan State University who, upon many occasions, interrupted his busy schedule to chair and guide the research through its early phases of development.

To the following individuals and groups who have contributed to this project, we here wish to briefly and inadequately acknowledge their support and assistance:

Mr. Bruce Siders,
Superintendent, Michigan School for the Deaf

Mr. Tom Poulos,
Principal, Michigan School for the Deaf

Mr. John Sibilio (Deceased)
Michigan Department of Mental Health

Dr. Ralf A. Peckham
Assistant Superintendent, Vocational Rehabilitation

Mr. Richard Gerst
Placement Coordinator, Michigan Department of Public Instruction, Division of Vocational Rehabilitation

Dr. Edward Hardick
Associate Professor, Speech and Hearing
Michigan State University

Mrs. Patricia Stump Walsh
Instructor, Speech and Hearing
Michigan State University

Board and membership of the Michigan Association for Better Hearing

Project Research Committee
Dr. Herbert J. Oyer, Chairman (1962-1964)
Dr. Mary Rose Costello, Chairman (1964-1965)
Mr. Cornelius K. Cooper, Board Member
Dr. George Lavos, Michigan School for the Deaf
Mr. L. A. Reese, Michigan Division of Vocational Rehabilitation
Mr. John B. Roraback, Michigan Division of Vocational Rehabilitation
Mr. Glen Rector, Board Member
Mr. Bert Maxson

Consultants
Abram Barch, Ph.D., Professor of Psychology, Michigan State University, Psychological and Experimental Design Consultant

In May of 1964, Professor Abram M. Barch, assumed the role of the project psychological and experimental design consultant. It was indeed fortunate for the project that an individual of his character and level of professional competence was willing to give of his time and advice. It was most unfortunate that his services, so badly needed, were so late in coming.

His patient guidance, advice and intense interest in the project were basic to any success in the final year of activity.

David Gage, M.D., Chief Medical Consultant, Disability Determination Service, Michigan Division of Vocational Rehabilitation, Consultant on Medical Policies and Procedures.

Claude E. Lowrey, M.D., Neurologist, St. Joseph Hospital Ann Arbor, Michigan, Consultant in Neurology.

Hugo Saenz, M.D., Private Practice, Lansing, Michigan, Project Physician.

E. Thomas, M.S.W., Assistant Professor, Department of Social Work, Michigan State University, Consultant in Casework.

Isabelle Starkey Nichols, Assistant Director, Michigan Association for Better Hearing, Consultant in Audiology and Speech.

M. Bethel Clifford (Deceased), Field Service Consultant, Michigan Association for Better Hearing, Consultant in Lipreading.

Project Staff

Stahl Butler, Executive Director, Michigan Association for Better Hearing
Robert M. Retherford, Research Clinical Psychologist
Edna P. Adler, Supervising Teacher and Vocational Counselor
Richard Hoke, Teacher of the Deaf in Industrial Arts (1962-July, 1965)
Andrew Hnatow, Teacher of the Deaf in Industrial Arts (1965)
Herbert L. Pickell, Jr., Teacher of the Deaf (1962-1965)
Robert Thomson, Teacher of the Deaf (1965)
Ernest Hairston, Teacher of the Deaf, (1965)
Harold Romine, Field Consultant
Mrs. Ruth W. Leonard, Bookkeeper and Project Treasurer
Mrs. Iola Alexander, Project Secretary (1962-1965)
Mrs. Avis Savidge, Project Secretary (1964-1965)
Mrs. Leona Julien, Project Secretary (1965)

INTRODUCTION

State and local rehabilitation offices throughout the United States have generally experienced difficulties in the placement of deaf clients who found it necessary to request their assistance. Because of the poor communicative ability of many of these deaf individuals, a low job placement rate is not surprising. A substantial portion of these persons not only lack employable skills but also lack the necessary prerequisites for benefitting from vocational training programs that might give them the needed skills.

In 1959, it was estimated there were approximately 500 such severely handicapped deaf males living in the state of Michigan, between the ages of 17 and 45 years, who were unemployable and beyond the scope of assistance offered by state and local rehabilitation offices.

In recognition of the magnitude of this problem and the intense need of such underprivileged deaf men and their families for aid, the Michigan Association for Better Hearing in 1961 proposed to the Office of Vocational Rehabilitation (now Vocational Rehabilitation Administration) the establishment of a Personal Adjustment and Pre-vocational Training Center at East Lansing, Michigan. This project, the first of its type, was initiated in January, 1962 through funds from a research and demonstration grant. The actual prevocational training of deaf clients commenced in September of that year, and terminated in December, 1965. This is the final report on the results of this project.

CONTENTS

Page

Acknowledgements... ii

Introduction... v

Contents... vi

Chapter I.. I
Purpose of the Project

Chapter II... 4
Selection, Screening, Admissions and Release Procedures

Chapter III.. 11
Description of Center Training Facilities and Training Program

Chapter IV... 31
Description of Center Trainees

Chapter V.. 33
Trainee Evaluation Procedures and Results

Chapter VI... 53
Collection of Normative Data to Supplement Trainee Test Records

Chapter VII.. 58
Center Employment and Placement Activities

Appendix A... 61

Appendix B... 105

Appendix C... 111

Chapter VIII... 119
Implications of Project Outcome and Cost Estimates

List of Tables... 136

CHAPTER I

THE PURPOSE OF THE PROJECT

The general purpose of this project was to develop readiness for vocational rehabilitation in deaf men whose handicaps were such as to preclude tthe efforts of the available services and resources of state vocational rehabilitation agencies in the state of Michigan. However, an expansion of the details of this purpose will be necessary to set the stage for a thorough understanding of the multi-dimensional characteristics of the problems involved in this type of program.

The typical deaf have numerous problem areas. However, during early stages of project planning it was recognized that this program should not be concerned with such individuals but with the non-feasible deaf adult or the "hard core" deaf (referred to throughout this report as either under-privileged, severely handicapped, or multiple-handicapped deaf.)

The Multiple-Handicapped Deaf

A significant question was: Why is this person "non-feasible" for vocational rehabilitation?

One early assumption, and the basis for the particular approach of the project, was that individuals born deaf (hearing is non-functional), or who lost their hearing within the first few years of life, had a three-way disability in communication--a problem not necessarily shared with others who lost their hearing after a speech and language pattern was established. In addition to an inability to hear, The congenitally deaf had severe problems with both spoken and written language. This three-way communication problem, complicated by inadequate or no educational experience, would be one example of a multiple-handicapped deaf person.

This, of course, was not the only type of multiple-handicapped individual, but it did appear to be one of the more serious of the various problem types within this group. Other types were:

1. Deaf men who needed a second chance because of imprisonment or confinement in a mental hospital.
2. Maladroit deaf who could not establish or maintain satisfactory personal relations with either family members or other individuals for psychological and social reasons.
3. Deaf men who could not maintain steady employment in spite of adequate formal education and a low, although limited, level of work skills.
4. Deaf men who needed help in personal grooming.
5. Deaf who had additional physical handicaps.

The large majority of men who fell into the above categories had communication problems.

Whatever the basis for these multiple limitations, the effects for most men were the same: isolation from family and society in general, dependence upon others for elemental needs, and a general loss of personal mobility and independence.

The assumption underlying training was that the program had to be geared to supply the multiple-handicapped deaf man, in a short period of time, with instruction in communication, language, personal grooming, social behavior and some orientation and supervised work experiences in working and living conditions. This approach assumed that all that was needed for most of the men was instruction in those areas in order to prepare and up-grade them for rehabilitation services.

Justification this training approach was initially predicated on the following assumptions:

1. Without concerted efforts to help them, the multiple-handicapped deaf men would not improve in status and might deteriorate.

2. There were available, in the disciplines of psychology, social work and education, known techniques which could be coordinated and directed to the rehabilitation of multiple-handicapped deaf men through the medium of an interdisciplinary team.

3. All the deaf men who would participate would, in some benefit, and some sizeable proportion of them could be brought to a state of readiness for full-time, paid employment.

Specific Purpose

The specific purpose of the project was to set up a model prevocational center and develop a demonstration program with research aspects that would promote a readiness for vocational rehabilitation in multiple-handicapped deaf men.

Objectives

Through the use of an interdisciplinary team - psychologist, teachers of the deaf, social counselor and outside technical consultants - a program of comprehensive diagnosis was to be developed which directed the form of assistance and remedial instruction necessary to up-grade those deaf men for rehabilitation services or immediate employment.

Within the framework of the Center, instruction and practice were to be given in the areas of:

1. Communication

2. Work experience

3. Activities of daily living

4. Occupational information and job adjustment

5. Daily personal and group counselling

The research aspects of the program were to be concerned with answering the following questions:

1. What pattern of factors appear to predict success or failure in vocational training and in a job?

2. How much time does the rehabilitation of individuals at specified levels of development and aptitude require?

3. What are the costs of rehabilitating individuals - to the point of feasibility for training or for employment - with differing levels of this experience?

In addition to providing answers to the above questions, the project was also expected to shed light on the problem of the amount of potential a deaf man must possess in order to benefit from rehabilitation. Although it was not expected that this project would yield definitive answers to this question, the experience and data obtained would assist future research directed toward development and validation of predictors of rehabilitation success.

CHAPTER II

SELECTION, SCREENING, ADMISSION AND RELEASE PROCEDURES

I. Selection of Candidates

A. Referral Sources --Candidates for placement in the pre-vocational training program were obtained from:

1. Michigan Division of Vocational Rehabilitation (DVR)
    - a. Direct referral through DVR local offices
    - b. Lists of known deaf DVR clients whom placement coordinators could not assist.
2. Family
3. Individual deaf men who expressed a need for help
4. Social and private agencies
5. State and local hospitals
6. Education institutions

B. Referral Processing

The Project Field Consultant had responsibility for handling referrals, making initial contacts, evaluating admission information, and conducting the intake. Candidates when first contacted, were given information about the scope and purpose of thd project and its intended goals. The field worker obtained the following types of information on the referral:

1. Need for project services - immediate circumstances of the candidate
2. Extent of the hearing disability
3. Extent of communication problems - method of communication, if any.
4. Names and places of previous employment
5. Names and locations of schools attended
6. General state of health
7. Names and dates of agencies or hospitals where individual was treated, evaluated or given medical, psychological or social aid
8. Names of medical doctors or other professionals with whom individual had contact.

In addition, written consent from the candidate or parents for the release of privileged, confidential information was obtained.

If, in the field consultant's opinion, the candidate met the criteria for eligibility, he submitted his findings to the professional staff for review and recommendations.

Review by the professional staff generally involved requests for additional information on the candidate such as school records and the previous employer's statements. Occasionally, decisions of admission or rejection were made on the basis of the field worker's findings.

II. Admission Procedures

A. Criteria for Admission

Eligibility for admission to the prevocational program was dependent upon the severity of the candidate's hearing loss and the effect this loss had on his social and occupational well-being. Because of the experimental nature of the program, selection of candidates was on the basis of broad criteria. Although certain basic criteria for eligibility had to be met, determination for admission was made on the basis of individual needs and the extent to which these needs could be met by the training facilities and services. In general, those factors considered for eligibility were:

1. Extent of need for:
    a. Retraining
    b. Preparatory prevocational training for vocational training
    c. Preparation for job placement
    d. Job placement help not usually available to multiple-handicapped deaf, other than at the Center.
    e. Social and personal guidance
    f. Vocational guidance
2. Age of the Candidate
    a. The individual had to be in the age range of 17 to 46 years, or had to have at least 20 years of employment potential.
3. Extent and severity of Hearing Loss

    Hard of hearing persons helped through amplication were generally not considered unless they had characteristics of a behaviorally deaf person, i.e., they did not rely upon hearing for communication or were not trained to use amplification.

4. Communication Skills

   a. No developed communication skills - could not read lips, sign, or in any way convey needs or information except through primitive pantomime.

   b. Poorly developed communication skills

5. General Physical Condition

   Extent of the multiple handicaps. Candidates who had extensive physical impairments other than deafness were anticipated, but individuals who had the following types of problems were not accepted:

   (a) Incurable illness or disease.

   (b) Symptoms of extensive brain damage that affected learning or severely limited mobility.

   (c) Blindness, or severely limited vision.

   (d) Severe orthopedic problems.

   (e) Other impairments that would have rendered training a useless expenditure of time and money.

6. Emotional and Intellectual Level of Functioning

   a. Individuals who manifested overt signs of severe mental disturbance (psychosis) or who demonstrated behavioral characteristics which suggested they would not be amenable to the usual rigors of the program were not admitted.

   b. Mental retardation- experience indicated that only those individuals who had obvious histories of gross mental retardation could be safely eliminated under this category. First impressions of mental retardation were untrustworthy since a combination of psychological factors often operated to give a false appearance of mental retardation.

III. Screening and Selection of Candidates

After initial contact with the prospective trainee and a review of the case by the staff, the field consultant arranged for the candidate and his family or interested persons to visit the Center.

During this visit the candidate was psychologically evaluated and a developmental case history was obtained from either parents or relatives by the staff psychologist.

A. Screening evaluation

1. Psychological testing - The prospective candidate was psychologically evaluated in the areas of intelligence, aptitude, achievement and visual motor coordination.

2. Case History

The case history was a vital tool in the psychological evaluation of the candidate as well as providing some insights into the early development of the individual; his problem areas as a child and then as an adult, the parents' reaction to the handicap, as well as their attitude toward the candidate.

The case history consisted of:

a. Name, address, birthplace, birthdate, age, referral source, informant

b. Statement of candidate's problems and reasons for referral

c. Job experiences

d. Childhood history

  (1) Condition of mother during pregnancy.

  (2) Description of the birth.

  (3) General information concerning candidate at birth and early physical problems.

e. Developmental history through 15 years of age

f. Description of childhood interests

g. Description of home, parents, environment

h. Parent's adjustment to handicap

i. Child's adjustment pattern to handicap

j. Description of psychological traits

k. Educational history

l. Adult history from 16 years of age on

m. Psychological problems

n. Adult interests

o. Religious training

p. Family history of diseases or related problems

3. Evaluation of Hearing Ability

As part of the pre-admission evaluation on the candidate, pure tone audiometric thresholds tests were given to establish the amount of hearing loss necessary to meet eligibility requirements for admission.

At the conclusion of the pre-admission evaluation, the general results of the test findings were discussed with the parents or relatives of the candidate.

A total of 25 applicants and referrals for this Prevocational Training Program were rejected because they did not meet the criterion of admission for one or more reasons (see Table 1 below)

Nine of the applicants were already employed. In four cases it was found that the applicants were not sufficiently impaired in hearing and communicative skills to necessitate Center training. The Center had inadequate facilities to handle the extreme of physicial and psychological problems (brain damage including cerebral palsy) presented by three applicants. It was felt that training would not be beneficial or would be detrimental in four cases. Two applicants fell outside the age range required for admission. For various reasons, the Center was unable to contact five of the prospective trainees after initial applications or referrals had been made. Two applicants did not choose to participate in the Center program. A remaining applicant was given minor assistance in correcting his vision, which made immediate employment possible.

TABLE 1

Reason for Rejection	Not actually or behaviorally deaf	Inadequate Center Facilities	Training would not Benefit	Employed	Too Young	Unable to Contact	Other
Number of Applicants	4	3	4	9	2	5	5

If the candidate met the criteria for acceptance, a date for admission was arranged by the field consultant. In addition, this worker discussed financial matters, (i.e., individual costs beyond those covered by the project contribution), personal needs such as clothing and personal effects, schedules of training, dates of vacation periods, the social living program and the standards of conduct expected by the Project. Generally, the parents or guardians were oriented as to the routine of the program and were invited to participate whenever possible.

Parents or guardians were required to sign release forms for confidential information, agreements for medical treatment (when needed) and releases from responsibility (legal and financial) for personal accidents of the trainees while in the program. Routinely, whenever possible, parents were asked to finance a neurological examination required for trainees.

Prior to admission,each candidate was required to have a complete standardized medical physical examination by the family physician or the project physician.

All of the personal data obtained about the new trainee was combined and made into a permanent case file. This file was maintained on a day to day basis and included the following sections:

1. Forms - all forms involving agreements
2. Case history
3. Medical and audiological data
4. Vocational Rehabilitation records
5. Educational records
6. Training progress reports
7. Psychological test data and psychological evaluations
8. Recommendations
9. Counseling contact sheets
10. Correspondence
11. Personal expense record

IV. Admission

Admission as a procedure involved receiving the new trainee, settling him into his living quarters at the Y.M.C.A. and introducing him to the program, the staff members, and other trainees.

During the first week after admission, the teaching staff conducted individual education assessments, aided by the psychological examination and defined areas of educational weakness.

An individual program was planned around the trainees needs, which was readjusted according to progress or lack of it. Additional psychological testing was conducted after admission. This testing became routine and periodic as different tests were introduced in the research aspects of the program.

Within a 2 week period, the new trainee was given a neurological examination by the project consulting neurologist. Skull Xrays with Stenver's Views were taken.. Electroencephelograms (EEGS) were taken only if prescribed by the neurologist.

IV. Release Procedures

Since the goal of training was the preparation of the trainee for either vocational training or job placement, release from the program was dependent upon his performances in those areas in which he received assistance through counseling and instruction.

A. Criteria for Release from Center Program

After the trainee had demonstrated satisfactory improvement in the areas of academic performance, social adjustment employability potential, he was considered for release. He was either returned to his local Division of Vocational Rehabilitation office or he was placed directly on a job by the Center. If returned to his local DVR office a full training evaluation was provided.

There were, however, situations which necessitated the premature release of trainees. These releases were contingent upon one or more of the following situations:

1. Failure to adjust to the regime of the program
2. Medical or physical problems beyond the scope of the program
3. Behavior which appeared to jeopardize the welfare of the other trainees
4. Voluntary withdrawal
5. Placement in closely supervised training situations which could accomplish those aspects of the pre-vocational training not resolved by the formal Center program

CHAPTER III

DESCRIPTION OF CENTER TRAINING FACILITIES AND TRAINING PROGRAM

I. Center Training Facilities

A. Formal Classroom Arrangements

The Prevocational Center occupied rented quarters in a new single story brick structure. Classrooms and the prevocational try-out shop were located in the basement. The basement area was divided into two medium sized classrooms capable of accommodating four men at each table. The shop equipment consisted of hand tools of sufficient variety for simple woodwork and metalcraft projects. There was a variety of different types of mechanical tools and a bench used in minor engine repair and tuneup work. In addition to a sufficient variety and quantity of hand tools, the shop was equipped with a metal working bench with a roller, notcher, box and pan brake, metal roller and metal shearer. The power equipment was limited to a shop smith with complete attachments and a saw smith.

The administrative offices were located on the ground floor of the building and were accessable at all times to the trainees.

In the spring of 1963 the classrooms were moved to larger quarters because of an expanding enrollment. The classrooms were located on the second floor of an office and apartment building six blocks removed from the project headquarters. As a result of this move, the prevocational shop occupied the entire basement area.

B. Social Living Arrangements

Trainees were required to live in individual rented rooms at the Lansing Y.M.C.A. This living arrangement served numerous practical purposes:

1. It afforded some of the men new experiences of living independently and away from sheltered environments (Home or institutional settings).
2. It provided an opportunity for social contact with hearing people.

3. It forced the trainee to cope with simple, every day problems that would arise as a result of this type of living arrangement.

4. It placed responsibility on the trainee to maintain some personal order in his living quarters and in his daily routine, i.e., arising in the morning in time to prepare himself for the day's activities.

The Y.M.C.A., located in downtown Lansing, Michigan, was ideal from the standpoint that the trainee has to use city buses to and from the Center. Many of the trainees had never used such forms of transportation and did not know how to take advantage of this type of facility or pay their own fares.

The project provided a daily allowance of three dollars and fifty cents a day, sufficient to pay for bus fare to and from the Center and to buy three meals a day.

II. Center Training Program

A. Introduction

The Center program was made up of a number of activities and ancillary services listed under the following program categories:

1. Academic
2. Prevocational Shop
3. Social Adjustment and Activities of Daily Living
    a. Individual Counseling
        (1) in the classroom
        (2) at the YMCA
    b. Group Counseling
        (1) in the classroom
        (2) Social Adjustment Class
        (3) group therapy classes
        (4) evening sessions at the YMCA
    c. Vocational Orientation and Counseling, conducted on an individual and group basis

d. Rehabilitation Counseling

e. Community Contacts (orientation to community services, industry, business and government) described in Course of Study.

f. Supervision on the job and work help (See Chapter VI)

4. Ancillary Service Program

a. Speech therapy

b. Psychotherapy (available when needed)

B. Center Academic Program

The course of study offered by the Center was designed to meet the needs of various types of deaf men whose problems fell into one of four possible categories. These categories were:

I. Non-verbal deaf adults with no communicative skills

II. Deaf adults with some but insufficient communication skills, whose social and occupational adjustment were insufficient for employment or vocational training.

III. Deaf adults with specific personal, social and occupational problems intensified by poor communication skills.

IV. Deaf adults who needed personal assistance with social and occupational adjustment and assistance in obtaining employment.

This general classification scheme changed as the types and quality of the trainees changed. However, at whatever level of training the trainee was placed, his program was progressive within limits of his abilities and included counseling and periodic evaluation.

PART I

A COURSE OF STUDY
FOR
NON-VERBAL DEAF ADULTS

Compiled

by

Edna Adler, Head Teacher

AIMS OF THE COURSE OF STUDY

It was the aim of this course of study to provide culturally and/or educationally and/or work-experience disadvantaged deaf men with personal adjustment and pre-vocational training to promote:

1. Ability to communicate verbally in both social and employment areas. Emphasis was on receptive communication in the form of reading to provide an avenue of access to a deaf person by hearing employers and co-workers.
2. Individual optimum in basic work skills, habits, and attitudes.
3. Satisfactory interpersonal relationships in both social and work environments.
4. Maximum job placement, job continuity, and adjustment to the work role.
5. Realization of the full implication of participation in a democratic society with an appreciation of both the responsibilities and satisfactions thereof.

DAILY SCHEDULE

9:00 - 9:30 Assembly

9:30 - 10:15 Class

10:15 - 10:30 Recess

10:30 - 11:30 Class

11:30 - 12:00 Class

12:00 - 1:00 Noon Recess

1:00 - 1:45 Class

1:45 - 2:30 Class

2:30 - 3:15 Class

Three to three and one-half hours daily was spent on academic work. Prevocational occupational adjustment training and group therapy took the remainder of the day.

Each trainee was to have a full period daily for language development. It may have been a combination - acquiring skill in use of the sign language and manual alphabet simultaneously with written language skills. Also, speech and speech reading training was offered.

One hour daily was spent on arithmetic; a practical approach was stressed. Consideration was given to trainees' individual needs for computation and use of measurements.

One hour daily was spent developing reading skills.

One hour periods were assigned twice weekly to social adjustment. These periods covered health, personal hygiene, grooming, social proprieties, community contacts and resources, shopping for personal needs, and general social skills.

I. COMMUNICATION

OBJECTIVES: To develop ability to communicate in whatever way or ways is possible to promote maximum opportunity for employment and for optimum adjustment to the adult role.

1. Instruction in the use of the manual alphabet and the sign language, if necessary.
2. Instruction in the mechanics of penmanship, both script and print, if necessary.
3. Instruction in auditory training, speech and lipreading, if feasible.
4. Development of a sight vocabulary was limited to a certain number of words directly related to environmental needs.
5. Instruction in the use of this vocabulary in simple meaningful sentences.
6. Beginning reading. Center-made material involving use of vocabulary already learned.
7. Continuation of vocabulary development and sentence construction using real life situations as a base. "Reading out loud in the language of signs" - a method that required translation of read material. Cross questioning always followed.
8. Textbook reading. Adult primers were used.
9. Continuation of vocabulary development and sentence construction both from primer context and resource material. This was patterned on the social and employment needs of the trainee.
10. Introduction of reading for content when and if the necessary readiness level had been reached.

II. ARITHMETIC

OBJECTIVES: To establish an understanding of the number system to aid trainees in handling their daily computational problems.

1. Practice in rote counting if necessary.
2. Instruction in the use of written symbols of individual numbers to whatever point a trainee was able to reach.
3. Language work involving these written symbols.
4. Practice work in addition and subtraction.
5. Development of an arithmetic vocabulary based on addition and subtraction.
6. Study of simple measurements involving:
    - a. Groupings
    - b. Value
    - c. Time
    - d. Length
    - e. Weight
    - f. Temperature
    - g. Contents
7. Practical experience in use of these measurements.
8. Language work involving use of simple terms of measurements.
9. Money
    - a. Vocabulary development
    - b. Classroom practice in making change
    - c. Reality experiences in handling and using money
    - d. Simple language work involving use of money terms.

III. SOCIAL STUDIES

OBJECTIVES: To develop a better appreciation of the world in general and to broaden personal horizons.

1. Geography
    - a. Study of immediate surroundings (Lansing).
    - b. Michigan
    - c. The United States (in a broad way)
    - d. Introduction of appropriate vocabulary.
2. Current Events

    Daily group reading and discussion of news using a local newspaper.

    Group reading and discussion of teacher-prepared material on local, national or world interests of the moment.

IV. SOCIAL ADJUSTMENT

OBJECTIVES: To develop competencies for an independent approach to social and job requirements.

1. Personal grooming and hygiene.

2. Better understanding by students of their handicap or handicaps and how to minimize them.

3. Training in proper inter-relationships with both the deaf and the hearing.

    a. Deaf must understand implications of and accept the fact that they are a minority group.
    b. Relationships

V. PRE-VOCATIONAL TRAINING

OBJECTIVES: To provide opportunity for job sampling and to assess individual trainee capacities, skills, and work attidudes.

1. Use and care of tools

2. Shop routines

3. Work experiences both in and outside of the Center proper todiscover and develop aptitudes and interests of individual trainees.

4. Introduction of shop language when feasible.

    a. Tools
    b. Shop equipment other than tools
    c. All those words (divided into parts of speech) that trainees at this level will be able to use.
    d. Use of these parts of speech in meaningful sentences and work orders, following procedure developed in Communication instruction.

LEARNING MATERIALS FOR USE WITH DEAF ADULTS WHO HAVE NO VERBAL COMMUNICATION ABILITIES

I. Reading

1. Flash cards (These featured a controlled vocabulary planned around
2. Charts, Signs trainee's language needs).
3. Teacher-made reading material using controlled vocabulary
4. A FIRST BOOK OF ENGLISH
5. ENGLISH THROUGH PICTURES and WORKBOOK
6. Games
7. L & R Learning Aids

II. Arithmetic

1. Flash Cards
2. Charts (teacher-made and commercial)
3. Common measurement material
4. Calendar charts
5. Individual clock charts
6. DISCOVERING ARITHMETIC, Books 2 and 3
7. Number Meanings
8. Games
9. Real and play money

III. Language

1. Beginner's Fitzgerald Key paper
2. Charts
    a. parts of speech (each one symbolized by a certain color)
    b. sentence patterns
    c. simple grammar rules
3. Teacher-made material

IV. Geography

1. Maps - city (Lansing), state, and country
2. Teacher made material
    a. factual
    b. related vocabulary
3. Books for slow learners (for reference)

V. Current Events

1. A daily newspaper
2. Magazine pictures and stories
3. Television programs (news and documentary films)
4. Roundtable discussions on topics of the day

VI. Social adjustment

1. Teacher-made material on personal grooming and hygiene
2. Conversational approach to problems of a hearing loss
    a. limitations
    b. personal assets that can outweigh the handicap
    c. socio-drama
    d. films

AN ORIENTATION VOCABULARY FOR NON-VERBAL TRAINEES

NOUNS

YMCA
CENTER
CLIENTS' NAMES
STAFF MEMBERS' NAMES
ROOM
KEY
MONEY
BED
CHAIR
TABLE
SOAP
TOWEL, (S)
NAME
PEOPLE
MAN, MEN
LADY LADIES
BOY, BOYS
GIRL, GIRLS
HOME
BUS
CLOTHES
STREET
LETTER
PAPER
PENCIL
BREAKFAST
LUNCH
DINNER
CHURCH
WIND
SNOW
RAIN

VERBS

SEE
SLEEP
EAT
RIDE
WALK
BUY
TALK
WRITE
STAND
SIT
GIVE
HAVE
LOOK
TAKE (A BATH)
BE

ADJECTIVE

CLEAN – DIRTY
HOT COLD
SICK WELL
WET DRY
SHORT LONG
BIG SMALL
GOOD BAD
HEAVY LIGHT
HIGH LOW
SLOW FAST

PREPOSITIONS

IN - ON
TO FROM
AT

PART II

A COURSE OF STUDY FOR DEAF ADULTS WHOSE VERBAL COMMUNICATION AND SOCIAL AND OCCUPATIONAL ADJUSTMENT WERE INSUFFICIENT FOR EMPLOYMENT

I. COMMUNICATION

OBJECTIVE: To develop maximum verbal communication for social and job situations

1. Instruction in the manual alphabet and the language of signs if necessary

2. Instruction in use of a controlled vocabulary designed for improved manipulation of environment, both social and employment.

3. Use of the "reading out loud" method in the language of signs.

4. Written language work (this proceeded concurrently with the reading mentioned above and aimed to:

    a. teach the trainee to use newly-learned sight vocabulary in expressive communication
    b. give a better understanding of the use of parts of speech in sentence construction
    c. develop increasing skill in the use of writing as a means of communication.

5. Instruction in language patterns for use in job situations:

    a. practice in reading work orders
    b. development of a job associated vocabulary of words, phrases and sentence patterns. Practicum in both receptive and expressive use.

6. Use of socio-drama to:

    a. develop ability to receive work instructions and to satisfactorily carry them out
    b. develop ability to satisfactorily express needs and ideas in a work situation

7. Introduction of vocabulary and language patterns normally used in daily living situations, outside of the area of work. Also:

    Letter-writing

    a. social
    b. business

II. READING

OBJECTIVES: To develop the greatest possible skill in reading and increase knowledge for facilitating receptive communication.

1. "Group oral-sign method" of reading instruction was continued as long as it was deemed necessary.

2. Content subjects were introduced as reading readiness was established.

3. Group discussion, as a follow-up on reading, was encouraged to foster the use of good English. The use of syntectical language was encouraged whether it was expressed orally or manually.

III. SOCIAL STUDIES

OBJECTIVE: To create a better understanding of the world we live in and our relationship to it.

1. CIVICS
    a. citizenship
    b. government
        1) local
        2) state
        3) national
    c. world affairs
    d. current affairs of local and national interest

2. GEOGRAPHY
    a. local and state
    b. the United States
    c. global
    d. travel
    e. geographic vocabulary

3. SCIENCE
   Introduction as a new subject or as a refresher course in basic science.

4. ECONOMICS
   A brief study of natural resources and how we are affected by them economically.
    a. Michigan
    b. United States

IV. ARITHMETIC

OBJECTIVES: To establish an understanding of the number system and computational processes to enable a trainee to be optimally adequate in handling his daily computational needs both on and off the job.

1. Instruction in number symbols as far as was practical for individual cases.

2. Sequences

3. Ordinals - to go as far as it seemed practical

4. Money
    a. counting
    b. making change
        1) practice work
        2) reality experiences
    c. vocabulary development

5. Vocabulary development
    a. sizes and amount terms
    b. location terms
    c. comparative terms
    d. tools
    e. measurement terms
    f. forms (abstract)
    g. time terms
    h. time measure
    i. postal terms
    j. money and business terms
    k. welfare terms

6. Multiplication (2 place numbers)

7. Multiplication terms and symbols

8. Division (2 place numbers)

9. Fractions

10. Practical problems couched in language that could be comprehended by individual trainees.

V. SOCIAL ADJUSTMENT

OBJECTIVES: To develop independence and social competence in relationships with others in both social and job situations.

1. Self help
    - a. health
    - b. grooming
    - c. manners
    - d. control
    - e. character training

2. Sharing
    - a. being part of a group (family relationships)
    - b. being able to talk and listen
    - c. being able to work with others

3. Group relationships
    - a. being able to cooperate
    - b. being able to contribute

VI OCCUPATIONAL ADJUSTMENT

OBJECTIVES: To develop readiness for entry or re-entry into the world of work

1. Personal competencies
    - a. work habits
    - b. ability to assess personal abilities
    - c. ability to recognize personal limitations

2. Social competencies for working
    - a. getting along with others
        - 1) authority figures
        - 2) fellow workers
        - 3) on the job rest-period; recreational facilities
        - 4) labor-management relations

3. Social Security
    - a. Social Security Act
    - b. Workmens Compensation
    - c. unemployment insurance
    - d. health and accident insurance
    - e. life insurance
    - f. pensions
    - g. savings
    - h. credit unions

4. Academic competencies in the world of work
    - a. reading
    - b. writing
    - c. arithmetic

VII. DRIVER EDUCATION

OBJECTIVES: To increase employment opportunities through minimization of transportation difficulties and, to promote mental health through increased access to the more limited social outlets of the deaf adult.

This course was offered to trainees with the understanding that it would cover only textbook learning and help prepare them for the required written examination. No attempt was made to provide instruction in vehicle operation. This was left to the individual trainee or to his parents.

VIII. OCCUPATIONAL EXPLORATION

OBJECTIVES: To provide exposure to occupations that are recognized as feasible for deaf persons who are disadvantaged educationally and who have not received vocational training. Exposure served a double purpose. It provided a trainee with occupational information that was meaningful to him and acquainted him with those work areas from which he could make a realistic job choice.

IX. PRE-EMPLOYMENT TRAINING

OBJECTIVES: To provide trainees with opportunities to sample various kinds of employment while continuing their general training, and to give the staff opportunity to observe, to make suggestions and to evaluate for special skills and aptitudes.

Pre-employment training was normally conducted as a half-day activity with the other half being given to continuation of needed personal adjustment training.

LEARNING MATERIAL FOR GROUP II

I. READING
- 1. Adult Education Readers
    - a. I WANT TO READ AND WRITE
    - b. ENGLISH THROUGH PICTURES, Book 2

- 2. Reading Skill Builders (Adult Level)
- 3. Rochester Occupational Reading Series I, II, III.
- 4. Newspapers
- 5. GOLDEN PICTURE DICTIONARY
- 6. THORNDIKE JUNIOR DICTIONARY

II. ARITHMETIC
- 1. Adult Education textbooks
    - a. Self-Help Lessons in Arithmetic, Books I, II, and III
    - b. Reference books, monographs and pamphlets
- 2. USING NUMBERS, Grades 5 - 12
- 3. Teacher-made material

III. LANGUAGE
- 1. Adult Education Worktexts
    - a. I WANT TO LEARN ENGLISH
    - b. LEARNING AND WRITING ENGLISH, Book I
    - c. LESSONS IN ENGLISH USAGE (Adult Elementary, Grade 8)
    - d. READERS DIGEST
    - e. The Fitzgerald Key
    - f. Teacher-made material

IV. SOCIAL STUDIES
- 1. Geography
    - a. Adult Education worktext: LIFE NEAR AND FAR
    - b. Maps (including travel maps)
    - c. A globe
    - d. Reference books for slow learners
    - e. Material in newspapers and periodicals
    - f. Vocabulary lists
        - 1) Names of places, including abbreviations
        - 2) Geographical physical features
        - 3) Location terms
        - 4) Direction terms
        - 5) Distance terms
        - 6) Weather terms
    - g. Discussions - how geography affects our way of living and earning
- 2. Science
    - a. Adult Education worktext: YOU FIND OUT
    - b. Readers Digest Science Readers
    - c. Reference readers for slow learners
    - d. Material on current scientific interest in newspapers and periodicals
    - e. Practical experience
    - f. Vocabulary related to science

Learning Material For Group II, cont.

3. Civics
    a. Adult Education Worktexts
        1) MY COUNTRY
        2) OTHER AMERICANS
    b. Booklets, monographs, pamphlets
    c. Current events - for group discussion
    d. Vocabulary list dealing with citizenship, state and national government, elections and taxes
    e. Films

V. GUIDANCE
1. Personal factors
    a. SCIENCE RESEARCH ASSOCIATE GUIDANCE BOOKLETS (to be revised by staff and offered in a modified form)
    b. Socio-drama
    c. Films
    d. Daily living experiences
    e. Discussions on health problems
2. Job factors
    a. Booklets, momographs, pamphlets dealing with the world of work (to be revised as needed)
    b. Occupational Exploration
    c. Reality experiences in the world of work
    d. Films
    e. Socio-drama

VI. DRIVER EDUCATION

Text: I WANT A DRIVER'S LICENSE
Monographs
Lectures
Center-made Tests

-- INSTRUCTIONAL MATERIAL --

Adler, Edna P. Social and Occupational Adjustment Training for the Young Deaf Adult (Manuscript)

Adler, Edna P. Job Terminology (Manuscript)

Buell, Edith M. Outline of Language for Deaf Children, Book I. Washington, D.C.: The Volta Bureau, 1954

Croker, Gertrude W., Jones, Mable K. and Pratt, Evelyn M. Language Stories and Drills, Book I, II, III, IV. Brattleboro, Vt: The Vermont Printing Company, 1940

Fitzgerald, Edith. Straight Language for the Deaf Washington, D.C.: The Volta Bureau, 1959

Goldstein, Herbert, and Seigle, Dorothy M. (Editors) A Curriculum Guide for Teachers of the Educatable Mentally Handicapped. Danville, Illinois: The Interstate Printers & Publishers, Inc.

Henderson, C. Sara and Greenberg, Bernard L. A Short Guide to English Writing. Washington, D.C.: Gallaudet Press, 1960

Illinois State Library Books for Retarded Readers

Mitchell, Elizabeth Gillilan. Beginning American English. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1957

O'Neil, Veronica Teaching Arithmetic to Deaf Children. Washington, D.C.: Alexander Graham Bell Association for the Deaf, 1961

Pugh, Bessie L. Steps in Language Development for the Deaf. Washington, D.C.: The Volta Bureau, 1955

Quill, Leonora C. Areas of Instruction for Teachers of Children Who Are Deaf. Champaign, Illinois: Champaign Community Schools, 1959

Sullivan, Helen Blair and Tolman, Lorraine E. "High Interest - Low Vocabulary Reading Materials." Journal of Education. 1961 (Reprint)

Townsend, Rebecca Mae Imaginary Line Handwriting, Book III. Austin, Texas: The Steck Company, 1950

Watson, Winifred and Nolte, Julius M. A Living Grammar. New York: Sterling Publishing Company, Inc., 1956

Warriner, John E. and Blumenthal, Joseph C. English Workshop, New Series, Grade 9. New York: Harcourt, Brace & Company, 1955

Wight, J. B. An Outline History of the United States. Cambridge, Mass.: Language Research In., 1952.

Committee of Teachers at the Central Institute for the Deaf. "Language Outline." American Annals of the Deaf, VC XCIV.

Fitzgerald, Margaret H. "Vocabulary Development for Acoustically Handicapped Children," American Annals of the Deaf, XCIV. (November, 1949, pp. 409-449

CHAPTER IV

Description of Center Trainees

Introduction:

The following Tables are based on information obtained from the case history record collected at the time of pre-admission processing.

The material is voluminous but, because of the few number of cases, no effort was made to statistically treat the data.

This data is presented so the reader may compare this data with other material presented throughout the report in any manner he chooses.

CHAPTER V

TRAINEE EVALUATION PROCEDURES AND RESULTS

I. Trainee Evaluation Procedures

A. Introduction

The major goal of the evaluation procedure was to amass as much personal data on each trainee as was possible so that a mutual effort could be made toward providing a basis for diagnosis and prediction procedures, which could be used in other similar types of training centers in the future.

The psychological diagnostic activities were directed at determining a minimum set of psychological tests and test situations, which would provide a useful basis for diagnostic procedures and predictions of feasibility of training.

B. The Evaluation Process

Evaluation was a continuing process, begun during the first contact, and ending when the individual was released from the program. Essentially, there were five periods of evaluation:

1. Referral Stage. Criteria for elegibility

2. Pre-admission. The areas of concern were:
    - a. Level of intelligence and achievement
    - b. Developmental history
    - c. Potential for adjustment to the program
    - d. Hearing evaluation
    - e. Medical physical examination

3. Admission
    - a. Additional psychological testing (Experimental testing)
    - b. Neurological examination
    - c. Follow-up hearing evaluation
    - d. Communication level of language proficiency; lipreading, speech, knowledge of the language of signs, finger spelling

4. In-training evaluations in:
    - a. Academic classroom performance
    - b. Shop performance
    - c. Achievement (standardized achievement testing)
    - d. Psychological testing and re-testing (experimental research tests)
    - e. Social living experiences (anecdotal reports and staff evaluations)
    - f. Communication skills
        - 1) lipreading
        - 2) speech
        - 3) manual language
    - g. On-the-job supervised work

    - h. Hearing (hearing evaluation was a continuous process undertaken as part of the speech therapy program).

5. Release evaluation

   a. Summary of educational progress
   b. Psychological testing
   c. Sociological problems
   d. Recommendations
   e. Prognosis

A complete record (journal was kept on each man during his stay at the Center. This journal included the total time spent in the Center and the number of hours spent in each activity (counseling, therapy, academic and vocational subjects, etc.). As part of the trainee's performance report, a financial record on each man was kept, which reflected all money spent for his rehabilitation. Based on all of the data collected during each trainee's period of training, written progress and evaluation reports were made. The final report was a summary of the trainee's progress and adjustment in the program with a prediction of success or failure in job placement or vocational training based on that record in the Center.

C. Description of the Evaluation Process

1. Medical Evaluation

   a. Physical evaluation: Prior to admission, the prospective trainee had to undergo a standardized physical examination (results of this examination were reported on a standardized form especially designed by a medical consultant to yield specific information) conducted by either a family physician or by the project physician.

   b. Neurological Evaluation: All new trainees were referred to a neurologist for a complete examination and skull X-rays. In addition to the usual neurological examination, when it was necessary for complete diagnosis, electroencephalograms (EEG) were made.

   c. Audiological Evaluation: At the time the prospective trainee came to the Center for the initial interview and psychological testing, he also received a preliminary audiological assessment.

   After admission the trainee was periodically checked and new assessments were made.

2. Social History Evaluation

Prior to admission a complete personal and social case history with a developmental history was taken from parents or relatives of the new trainee. The information obtained from this case study was integrated into the new trainee's personal file. Pertinent personal data was used as an aid in developing that individual's course of training. In addition, case history material provided statistical data for the research aspects of the program.

3. Psychological Evaluation

The psychological evaluation was designed to yield the following types of information:

   a. Intelligence range
   b. General academic achievement level
   c. Perceptual motor skills
   d. Special areas of interest and aptitude

Test results obtainedat admission not only assisted the professional staff in planning an individul's program but were useful, when combined with periodic test results, in the assessment of trainee progress or lack of it in the program.

Psychological testing was an important component in the overall evaluation procedure. Interval testing provided temporal data on the trainee and contributed to the body of research data.

5. Academic Evaluation

Bi-monthly tests, made up by each teacher, based on material covered during that period, were administered. These areas in which bi-monthly testing was done were:

a. Reading
b. Language - communication skills
c. Arithmetic

Test scores were based on percent of correct answers. A graphic record was maintained for each man in each of his academic subject areas. Standardized achievement testing was done at random intervals and aided in evaluating the results of teacher tests.

Table 31 shows the scope of the training program and hours each trainee spent in that subject area.

5. Prevocational Shop Evaluation

The prevocational shop was designed around the notion that no effort would be made to develop vocational skills in the trainee, but to orient him in the use of certain basic tools used in an industrial setting. This shop setting provided try-out experience where performance in some types of occupations were sampled.

Evaluation of a trainee's performance was based on his existing knowledge of tools and their application prior to work orientation class and its conclusion. The trainee was exposed to information and practical experience in the following areas: (See Appendix B)

a. Metal work (simple)
b. Woodwork - use of hand tools and simple automatic shop equipment
c. Auto repair - engines, simple gasoline engine repair
d. Drafting and general drawing
e. General painting and simple refinishing, including paint spraying

Each trainee was given specific projects which were graded on performance, work accuracy, work quality, interest in the assignment and speed completing the assignment.

Table 31. Shop Report Summaries, presents a brief summary of efforts by the shop teacher to evaluate trainees in the prevocational shop.

Evaluations for a number of the trainees were not obtained. Although this information was thought to be of value, the time required to amass it and the shifting nature of the training objectives were partially responsible for these omissions.

6. Evaluation of personal Adjustment to the Program

Monthly written reports were submitted on every trainee by each of the teachers. These reports outlined those strength and weaknesses observed in the trainee's classroom activities and behavior. If a trainee was in counseling or in group therapy, records were kept of his progress or lack of progress.

The areas of concern were:

a. Learning capacity
b. Work tolerance
c. Production (classroom assignments)
d. Attendance and punctuality
e. Unusual behavior or mannerisms
f. Judgment and dependability
g. Frustration tolerance
h. General physical appearance - dress and body cleanliness
i. Knowledge of equipment, safety and Center shop policies.

7. Psychological Test Program

a. Limitations of Psychological Testing of Deaf Adults

The inclusion of psychological testing as an integral part of the ongoing evaluation program of Center trainees presented numerous problems. Basic among these problems was the lack of availability of tests which would yield useful psychological data on deaf adult males who had little or no communicative skill or reading ability.

Selection of a basic test battery had to include tests which could provide information on general intelligence, perceptual motor ability as well as ability to learn new ideas, the areas of learning that might be most successful, as well as measures of mental maturity. Also the tests selected had to be of the type which had simple instructions which could be conveyed either through sign or pantomime.

An important consideration in test selection was to choose those tests which, when combined with other types of measures, such as subjective teacher ratings, academic classroom performance, industrial arts class performance and case history material, would provide data useful in trainee evaluations or prediction of success on the job, or in vocation training.

In spite of the inadequacy of available psychological tests as they might apply to evaluation and prediction for deaf adults, the goals of the test program were to:

1) Provide basic data on intelligence range, motor skills, special aptitudes, achievement and interest levels of deaf men being considered for training for purposes of program planning.

2) Provide psychological test data for research.

3) Aid in the evaluation of trainee progress or lack of it in the program.

In 1962, when the training program began, the psychological test battery was made up of 3 tests of intelligence, 2 tests of achievement, and 2 tests of motor-sensory ability.

By the summer of 1964, the psychological test repertory consisted of 39 various types of tests, of which only 29 were found to yield useful information for client evaluations and research.

Tests which required the testee to read questions and provide answers either through the median of speech or writing were of questionable value, particularly for those trainees who lacked adequate communicative skills and who were illiterate. Clinical tests used for personality evaluations, such as the Roschach, Thematic Apperception Test (TAT), which required the client to report ideas, feelings and description verbally, were also of little value. However, the TAT and Rorschach were employed in experimental group therapy. These results will be reported in a later section of this report.

b. Test Battery - Tests of Intelligence and Mental Maturity

At the onset of the program two tests of intelligence, one test of intellectual efficiency and one test of mental maturity were employed. These tests were:

1) Wechsler Adult Intelligence Scale
2) Beta Revised (non-verbal) Test
3) Raven Progressive Matrices
4) Vineland Social Maturity Scale

At the conclusion of the project, a total of five different test of intelligence were used, and the Vineland Social Maturity Scale continued in use. A complete list of these tests will be found in the index in the back pages of this report.

The variety of psychological tests used had several basic features in common. Instructions were simple and could be given in either sign or pantomime; little emphasis was placed on reading or oral verbal ability (with the exception of achievement tests).

8. Testing Procedure

All tests were administered according to the standardized instructions of the various test makers. Instructions were either given in sign, speech or pantomime. Time limits were adhered to and adjustments were made only when a subject did not understand instructions or could not understand examples or practice tests. It was not uncommon for test periods to extend beyond that normally required for hearing persons, but this time extension was due to the limitations of the individual deaf man to understand the test instructions - no additional time was ever given to the testee as compensation for his handicap.

All tests were administered by the clinical psychologist or by persons trained by him for this specialized work. Most tests, with the exception of those of the achievement tests which were in some cases administered in groups, were administered singly and in well-lighted rooms with sufficient work space.

9. Description of Project Tests

a. Intelligence Tests

I. Wechsler Adult Intelligence Scale (WAIS)*

The WAIS is a revision of the origianl Wechsler-Bellvue Intelligence Scale and yields subtest scores designed to provide a point scale indication of intelligence in six verbal and five performance areas. Raw scores on the various subtests were converted directly into standard scores in order to facilitate intercomparisons. The various subtests provided indices of impairment from sensory, motor and other disabilities. The factorial constitution of the subtests was quite simple. The major factors were verbal, non-verbal and memory.

Because of the low verbal facility of most of the trainees, only the six performance subtests were administered. Only in two cases was it possible to obtain Full Scale IQ scores.

II. Beta (Revised 1946)*

A non-verbal intelligence test including six subtests (mazes, symbol, digit substitution, pictorial absurdities, paper formboard, picture completions and perceptual speed). Explanation to tested of procedure is principally done by practice and pantomime. Scores are as deviation IQ's.

III. Chicago Non-Verbal*

A non-verbal intelligence test which can be administered orally or in pantomime, designed to minimize the English language factor (but not cultural factors) in testing children and adults. The test consists of ten subtests tapping spatial ability, chronological reasoning, discriminatory ability, perceptual speed and memory. IQ scores up to age 15 are provided as well as M.A's and standard scores for individuals 15 years and older.

IV. Vineland Scale (Social Maturity)**

A developmental schedule concerned with the individual's ability to look after his practical needs and to take responsibility. Information is obtained by interviewing subjects on daily living habits. Eight categories are used: General self help, self help in eating, dressing, self direction, occupation, communication, locomotion and socialization. Scores are in terms of social age and social quotient.

V. Raven Progressive Matrices*

A non-verbal intelligence test designed to measure general intelligence (education of relations), drawing principally on discriminatory ability and reasoning by analogies. The test consists of sixty incomplete patterns, requiring the subject to choose the correct insert from the six possible distractors. There are five subtests, each with a different theme, and organized in increasing order of difficulty. The test is said to be relatively less related to academic achievement educational opportunity or cultural background than most tests of intelligence.

VI. Leiter Adult Intelligence Scale*

An intelligence test which has as its distinctive feature the almost complete elimination of instructions, either verbal or pantomime. Tests are administered by attaching appropriate response cards containing printed pictures to a response frame. Tasks cover a wide range of functions similar to those found in verbal scales including matching colors, forms, or pictures, copying, picture and series completion, analogies, spatial relations, memory, similarity detection and classification. Scores are given in terms of MA and ratio IQ.

VII. Peabody Picture Vocabulary Test

The Peabody test is administered in the general style of Stanford-Binet, i.e., the examiner selects an item believed to be at the level of the testee, proceeds to simpler items (approximately six) until a certain number are successfully correct and then test above that number until a certain number are successively wrong.

Administration of the test with normal hearing subjects uses oral presentation of the test words. For each item the trainee was either shown the work in written form as a special card or the word was manually signed to him. He then looked at a plate containing four pictures and selected the one he thought was most related to the word. (No deaf norms existed for this test).

The Peabody test is a vocabulary measure in which the subject indicates his knowledge of the test words by selecting one of four line illustrations as most related to that word.

VIII. SRA Primary Mental Abilities**

Elementary - divided into five subtests concerned with verbal meaning, spatial ability, reasoning, perceptual speed and number ability, through the use of words, pictures and figures.

Intermediate - divided into five subtests concerned with verbal meaning, space relations, reasoning, number and quantitative and word fluency. Words, completing letters in sequence, figures, math computations, and lists of words, under specific criterion, produced by subject are used in measurement of these traits.

IX. Non-Verbal Form SRA**

A brief non-verbal intelligence test of sixty items in the form of selecting a picture "most different" from the other four. It involves pictured logical relationships and geometric relationships. A useful supplement to verbal mental ability tests.

X. Porteus Maze**

Porteus described this test as a measure of foresight and planning capacity. These fourteen mazes can be administered with no verbal instructions by using the easier mazes for demonstration purposes. The mazes range from the three year to adult level in steeply graded progression. Scoring takes into account the number of trials needed to successfully complete each maze and the level of maze difficulty reached. No spontaneous correction of error is permitted, a new maze being presented after each error.

b. Special Perceptual Tests

I. Obscured Objects**

An experimental test in visual perception which requires that a subject find as many obscured objects in a stimulus maze (either human or animal heads) as possible. He indicates its location on an outlined version of the maze. The stimulus maze may be rotated in any direction. Scores are recorded in terms of time required for thd subject to find ten objects.

II. Wisconsin Card Sorting**

A test which gave some promise as a diagnostic tool in studies with schizophrenic, brain-injured and mentally defective subjects; this test consisted of asking subjects to sort cards on the basis of form, color or number of objects presented, or a combination of these criteria. The subject is not told the criteria, however, he is told only if his card placement correct or incorrect. From this information he must discover the criterion and make ten correct responses to this criterion. At this point, the criterion is changed and through trial and error the subject must discover the new criterion. Scores are given in terms of the number of responses the subject makes before discovering the new criterion after the change in criterion has been made.

III. Taylor Perceptual Closure Scale**

A test made up of a drawing of an incomplete human form and house. Designed to test rigidity of perceptual closure.

IV. H and R Color Form Test [1](project developed)*

A perceptual test designed to sample hand-eye coordination and shift in learning set.

The test was made of a number of wooden objects cut in various shapes, none exceeding a 3" diameter, and colored.

The wooden shapes were to be placed in aperatures cut to size and shape with bases colored to match the objects. After ten trials using matching shapes and color, figures were substituted for shapes whose colors differed from those of the base of the aperature. A total of twenty trials was run, ten for each set.

[1] Hoke, D. & Rotherford, R.M. designers of original test

V. Bender Motor Visual Test (Bender-Gestalt)**

Nine simple designs are presented individually on cards, the subject being required to copy each design with the sample before him. Tests are interpreted in terms of amount and type of deviation from the sample.

c. Manipulation and Coordination Tests

I. Crawford Small Parts Dexterity Test*

Designed to measure "fine eye-hand coordination". Involved is the assembly and adjustment of electric devices and the manipulation of small hand tools. A metal plate containing holes, screws, collars, pins, tweezers and a screwdriver are used in various combinations of manipulations. Scores are reported in terms of time needed to reach a set criterion.

II. Minnesota Rate of Manipulation Test (Turning Subtest)**

Designed to measure manual dexterity and rapidity of gross movements (singly or in combination) of hands, fingers and arms. Equipment consists of a board which contains holes and cylindrical blocks used (separately or in various combinations) in various ways such as placing, turning, displacing, one or two hand turning and placing. Scores are reported in terms of time taken to complete each task. Each individual was given four trials, each trial requiring the turning of sixty blocks on the board. The time taken to complete the test was recorded.

III. Pursuit Rotor***

This is a test of hand-eye coordination in which the subject was required to make contact with a stylist on a small target located on a revolving disc. Contact by the stylist with the circular target completed an electrical circuit triggering a clock which recorded the number of seconds subject remained on the target. Scoring was the total number of seconds of contact in five 15-second trials with a 45-second intertrial rest.

IV. H and R Block Construction Test[1] (Experimental)*

A perceptual puzzle test which required the testee to join five individually cut pieces of wood of equal size, but with corners cut in such a manner that if connected properly would form a box with a base or lid and open at one end.

[1] Hoke, D. & Retherford, R.M. Designers of original test

d. Aptitude Tests

I. California Survey of Working Speed and Accuracy**

A survey intended for selection, placement of routine office, industrial workers, and clerks who perform clerical operations. This test consists of number checking for measuring perceptive and motor accuracy, code translation to measure ability in learning and applying complicated procedures, dotting as a measure of finger dexterity and perserverance, and counting of vowels to measure awareness of a given condition.

II. McQuarrie Test of Mechanical Ability**

A test to measure mechanical aptitude. This test includes seven subtests - tracing, tapping and dotting to measure speed and accuracy of eye-hand coordination, and copying, location, blocks and pursuit, designed to measure spatial ability.

III. Minnesota Paper Form Board*

A test designed to measure the ability to visualize and manipulate objects in space. Each item consists of a figure cut into two or more parts. The subject determines how the pieces cut into two or more parts. The subject determines how the pieces fit together and chooses the drawing that correctly shows this arrangement.

IV. H and R Tool Test[1] (project developed - experimental)*

A three-part test designed to obtain measures on nomenclature of tools, their use, and how best employed. This was a multiple choice answer test requiring reading ability on Parts I and II. Part III was made up of pictures of tools with multiple choice answers in picture form.

e. Achievement Tests

I Stanford***

A test of academic achievement in areas of paragraph meaning, word meaning, spelling, arithmetic computation and reasoning in the primary battery, extanding to language, social studies, science and study skills in the intermediate and advanced batteries. (Material for questions was gathered after analysis of subject matter by specialists of curricula, courses of study and textbooks).

Grade levels are given on the basis of percentage of students passing each item at national age and grade norms.

II. Wide Range - Arithmetic***

A crude survey of skill in arithmetic computation from kindergarten to college level, beginning with counting dots and going through simple algebra and logorithms.

---

[1] Hoke, D. & Retherford, R.M. designers of original test

III. Signing

A test made up of a number of common terms easily converted into language of signs which required responses and questions requiring answers in sign.

Because this test was developed so late in the project, its use was of little value.

The following tests were found to be inadequate for use with the project trainees:

Group A Tests:
1. Iowa Silent Reading Test
2. Minnesota Multiphasic Personality Inventory (MMPI)
3. DAT Mechanical REasoning

The major reasons for exclusion of these tests from the test battery were due to the difficulty of conveying test instructions in the language of signs and because of the extremely low level of reading ability of most of the trainees; even the simplest of test questions were often beyond their level of comprehension.

Group B Tests:
1. Rorschach (Ink blot test)
2. Thematic Apperceptive Test (TAT)

Attempts to administer the projective tests individually to the trainees was not successful. This lack of success was due primarily to the fact that most of the men lacked an adequate signing vocabulary to convey the subtleties of their perceptions, and, in some instances, it appeared as though the lack of structure in the Rorschach plates produced confusion and led to responses that were not appropriate either for scoring or interpretation. Often both tests stimulated the testee to name parts of the various reproductions but not to emotionally respond to the test stimuli in the hoped for manner.

Group C Tests:
1. Geist Picture Inventory

This instrument was designed primarily for use with deaf as an aid in assessing work and occupational interest patterns.

Results obtained from this instrument were of little help in fixing stable interest patterns for the Center trainees because of the unrealistic aspiration levels of most in relation to their real abilities and circumstances of vocational preparation. Another major objection was that seldom did retesting reveal a stable interest area, i.e., administration of the test after a tour of a local business or industrial plant generally provoked desires for employment in those types of work areas; perhaps, in some cases, there were expressed desires to be printers, preachers or teachers.

This instrument was of no use as an aid for occupational counseling or job placement.

Group D Tests:

1. Vineland Social Maturity Scale

This social maturity scale was employed as one effort to determine the approximate social age of the trainees. Generally, the information for this scale was obtained from the social case history taken at the time of or near admission.

The types of questions upon which scoring was based was not of particular value for use with the types of men found on this project. That is, most were in some manner able to take care of themselves, etc., but the sorts of subtleties that could have made a difference in the social ages of the trainees was not included in the scoring sheet. With few exceptions, the Vineland scores provided broad ranges of social age but failed to discriminate between the qualities of differences that existed between men at this level and other types of individuals not in the project. Because of this we found the data of little real immediate value.

* Tests administered at admission with a retest prior to release from the program.

** Only one measure was obtained - no retesting

*** Periodically readministered

II - RESULTS

General Intelligence Tests

Table A-3 presents the intercorrelations among the subtests of the WAIS for the project trainees and for a comparison group of young adults. Generally, the relations for the trainees parallel those for the normal hearing. However, the digit-symbol test provides a quite different pattern. Even with the normal hearing, this test, more than the others, measures a different aptitude characteristic. This difference is accentuated in our population.

The relative difficulty of the various subtests is also of interest. From easiest to most difficult, they were: digit symbol, object assembly, block design, picture arrangement and picture completion. The scores for the latter two tests were only about half the level they were for the first three. A similar pattern was found for those trainees who were retested on termination.

The intercorrelations among various measures of general intellectual ability for the project trainees are given in Table A-4. At first inspection, the pattern of relations among the WAIS, Beta, Chicago Non-Verbal and the Raven would suggest that there is little to differentiate them. The intercorrelations vary from .60 to .71. The letter might even be added to this group if the .39 between it and the WAIS can be considered a chance variation. If complete substitutibility were desired, -- as in parallel forms -- one would hope for somewhat higher correlations, but the small size of the sample employed should be kept in mind. Thus, without further consideration, it might be tempting to select that test instrument with the shortest testing time or the one that requires the least training to administer. However, the results obtained later in attempting to predict job potential strongly indicates that the tests are not comparable and that the WAIS and the Beta were definitely superior to the others.

Multiple correlation procedures were not applied because of the shrinkage that would be expected with such a small sample.

Perceptual Motor Tests

Apparatus tests such as the Minnesota Rate of Manipulation Test or the Pursuit Roter are often regarded skeptically by personnel workers. Their initial cost is higher than conventional paper and pencil instruments; they rarely can be group administered; their use involves maintenance problems of the mechanical sort that many testers have no training or ability to cope with. Yet, the fact remains that they can tap aspects of individual ability that can not be measured by other means. Furthermore, a properly run training program for vocational rehabilitation should have at least one person skilled enough in mechanical and simple electrical problems to aid in apparatus maintenance.

Both apparatus and non-apparatus tests were used to assess perceptual-motor skill since it was possible, for such a deaf group as ours, that equivalent results might be obtained and future test programs simplified. Table A-5 presents the intercorrelation of the tests of perceptual-motor skill for the project trainees. Normally, inter-test correlations of .35 or so are the highest level of expectation for such tests. This pattern holds except for the unexpected high relation between the Crawford and the Pursuit Rotor tests. The Crawford-MRMT relation was also higher than expected. Attempts to predict estimates of job potential would suggest that the three tests should be retained in future test batteries. Of parenthetical interest is the -.35 correlation between the WAIS and the Crawford.

Other measures

A wide variety of psychological measures were added to the testing program at the request of the project consultant. The results of a number of these are not reported. This omission is due to the fact that a number of these tests could not be obtained, nor testers trained to administer them, in time to test more than a handful of men. Small samples were especially injurious to the experimental type of test which was designed to provide objective assessment of personality and cognitive structure. In other instances, proposed testing or assessment simply could not be carried on without penalizing other important functions and activities of the project. The research aspects of the project were grossly undermanned.

HOKE & RETHERFORD TOOL TEST

Early efforts to locate a suitable instrument for use in the project, designed to measure basic knowledge in nomenclautre and application of everyday, basic types of tools found in light industry, repair shops and home workshops were unsuccessful.

In order to meet this need, the Industrial Arts teacher, in cooperation with the staff psychologist, designed and produced a tool test that would meet project needs.

This test had several major functions:

1. It aided in shop assessments of trainee knowledge of tools and their use and admission.
2. It provided a standardized check on trainee progress in shop.
3. It served as a teaching device.
4. It was valuable in the preparation of pre-release evaluation reports.

Description of the H & R Tool Test

The tool test had three parts -- each part was made up of 65 live pictures of simple basic tools. All three parts (Parts I-II-III) had the same pictures but required different types of responses.

Instructions were deliberately worded in simple language so they could either be easily read or translated into sign.

Part I: The testee was told to read the instructions on the first page which read: "Select the correct name of the tool pictured on your left. List your answer in the blank space provided on your right side. There is only one (1) correct answer for each tool."

Part II: The testee was instructed to "Choose the right work which the tool does."

Part III: The testee was presented with a series of drawings for each of the pictures in the left column of each test page. He was instructed to: "Circle one number (1-2-3-4) for each picture on your left which 'tells' you what the tool does. There is only one (1) right answer."

Scoring the H & R Tool Test

Scoring consisted of counting the number of correct responses on each page of each part and totaling the scores. This procedure was done for each of the three Parts. Since each of the Part scores measured different aspects of the same set of test stimuli, combining the results would have merely concealed each function. The scores on each Part remained a separate score.

Normative Sampling of the H & R Tool Test

In the Spring of 1963, the tool test was administered to a sample of 114 male students in a deaf school ranging in age from 9 years to 20 years of age. All of the students used in the sample either had basic shop work, intermediate shop work, or were taking work in introductory shop at the time mass testing was conducted.

Testing of the young deaf was done in groups, generally in their classroom for that period or in their shop or tool machine shop classes.

The time required for the administration of each of the three Parts varied because of the difficulty some had with instructions, however, the average time for Part I was 15 minutes, for Part II was 12 minutes and for Part III was 10 minutes.

Statistics for the deaf school sample consisted of calculating the mean score for the entire population of 114 students and then isolating scores of the various age groups, and arriving at means for each age group. Additional statistics, standard deviations and ranges of scores will be found in Table 33. The reader is at liberty to compare the test results obtained from the project trainees over the past three years (Table 32)with those obtained from the deaf school population (Table 33).

Professional Staff Ratings of Trainees

Three teachers and the social worker, prior to the conclusion of the project were asked to judge the trainees on the basis of certain criteria based on their special area of interest in connection with the training program.

The same set of instructions was given to each of the professional staff members but the criteria varied. The instructions read as follows:

INSTRUCTIONS TO THE JUDGES

> You are being asked to rank the trainees on the basis of several criteria: For each ranking, you will rank the men in order from best to worst (or most to least) with no ties permitted.
>
> For each criterion you will have a card describing the kind of judgment you should make. Each trainee's name will appear in a pack of cards that goes with the criterion card. Order the name cards from best to worst (or most to least). Then number your choices from 1 to 33, on the cards, so we have a permanent record of your ordering. You will have a separate pack of cards for each criteria.
>
> Always finish judging one criterion before moving on to the next one; and always judge the criteria in order.

The criteria for each of the judges was as follows:

Mrs. Edna Adler - Head Teacher and Placement Coordinator

1. Please rank the trainees from BEST to WORST on their ability to hold a job and remain employed because their work is satisfactory to their supervisor USE your observations of them in the field and the reports you have from the employers to make this judgment. IF the men have never been placed on a job, judge how well you think they would do if you could find a position for them. If there is any discrepancy between your judgment of the trainee based on the work they did at the center and the caliber and adequacy of their performance on the job(s), give full weight to on-the-job performance.

   If by chance a man is doing well or acceptable on a job but he does not intend to remain on that job, use employer's rating as your basis for judgment.

   On a single sheet of paper make a list of those trainees that made a truly conspicuous improvement.

2. Based on your initial contact with the trainees, rank them according to how much you thought they would benefit from the Center program.

   Make a list of the names of those trainees whom you think benefitted the most from the Center program.

3. Rank, from least to most in terms of amount of continuous supportive help they would need in order to maintain their jobs.

4. Rank all of the trainees from best to worst on the basis of demonstrated improvement from intake status to final (release) status.

Mr. Richard Hoke, Industrial Arts Teacher, Teacher of the Deaf

1. Rank all of the trainees from best to worst on the basis of demonstrated improvement from intake status to final (release) status.

   Make a list of those trainees that made a truly conspicuous, noticeable improvement. Make your list on a single sheet of paper.

2. Rank all of the trainees from best to worst in terms of their ability to carry out vocational shop tasks at the end of their training.

3. Rank the trainees from best to worst, in your opinion, in their ability to hold a job and remain employed. That is, judge how well they would perform if placed on a job in terms of their ability to satisfactorily carry out the requirements of a job. You can assume that the manual demands of the job are not unreasonable for the persons involved.

Mr. Herbert Pickell, Teacher of the Deaf

1. Rank all of the trainees from best to worst on the basis of demonstrated improvement from intake status to final (release) status.

   Make a list of those trainees that made a truly conspicuous, noticeable improvement. Please make your list on a single sheet of paper.

2. On the basis of your classroom observations, rank all of the trainees from most to least in terms of ability to perform your classroom requirements without help from you after the initial instructions.

Mr. Harold Romine, Social Worker (Field Service Consultant)

1. Rank all of the trainees from best to worst, on the basis of your judgment, of demonstrated improvement in the area of social acceptance (i.e., getting along with other trainees and generally developing socially acceptable behavior) from intake status to final (release) status.

   On a piece of paper write the names of those trainees who showed the most conspicuous improvement.

2. Rank the trainees from most to least in terms of psychological support, understanding and acceptance by the immediate members of their family.

3. Rank the trainees in terms of social acceptance (as expressed in criterion #1) by peers (other trainees) at the time of termination from the project as of September, 1965.

Methodological Considerations Involved in Obtaining Criteria

Employer ratings on the men were not obtained because of the obvious difficulty of attempting to put twenty or so untrained raters on a common scale -- especially since many of the employers had not previously had any deaf employees. Total or average weekly earnings from post-training employment was another measure of job success that was considered and rejected. A number of men had not yet completed their training at the time that the project activities had to be summarized for the final report. Further, some of the men had been on several jobs in which the salaries varied. The total and average weekly earnings of the various trainees and the nature of the positions held are listed in Table 34. The reader is free to relate these to the staff rankings (Table 35 or to the test scores for the project trainees given in the main body of the report and in the Appendix.

The measure of job potential with the least number of objectionable features appeared to be judgments by the staff personnel. They had little or no training in the characteristics of psychological tests -- especially those in the perceptual-motor area -- and preferred to make their own assessments of the best way to cope with various trainee problems. Thus, their assessments could be regarded as being relatively free from the possibility of bias toward the psychological test scores. Furthermore, they were acquainted with all of the trainees and could put them on a common scale.

It should be noted that the staff personnel were required to rank the trainees from best to worst rather than to rate them on a scale with 7 or so intervals. Earlier attempts at obtaining conventional ratings from the instructional staff yielded highly unusual and suspect distributions or failures to discriminate any but very gross differences. Since judgments of job potential was so critical a measure and since the working demands of the program precluded a training program in the making of man-to-man ratings, a ranking procedure was used which forced discrimination by forbidding ties.

A set of ranks has some limitations for statistical analysis -- especially in the computation of correlations. Fundamentally the problem is that small differences at the center of the distribution are magnified in relation to those differences which exist at the end of the distribution. This problem is common to any statistical transformation that converts what is a normal distribution into one that is rectangular. The net result is to attenuate the correlations that may be obtained with other measures.

Another point to be kept in mind about the rankings is that the number "1" is assigned to the best individual, "2" to the next best and so on. Thus, small numbers on the job potential scale mean "good" performance. Most tests are designed, to have high numbers mean good performance. Thus, negative correlations here do not mean inverse relations unless the predictor test is designed, as some speed tests are, to have small numbers for good performance.

The head teacher and placement coordinator (Adler) was the single person whose duties were such as to be able to make judgments about the on-the-job performance of the trainees both from personal observation and from interaction with the trainee's employer or supervisor. Judgments of potential success were obtained from other staff members to supplement her judgments. Hoke, as the shop instructor was the most directly acquainted with the manual skills of the trainees. Pickell, as a general instructor, saw the trainees in the classroom and in some social situations while Romine, the social worker, knew their family situation as well as concerning himself almost exclusively with their social interaction.

Table 36 presents the intercorrelation of the various criterion rankings for different types of rankings for various staff members -- e.g. ranking 1 and 3 for Adler. The extent of agreement across the various staff members is not surprising despite the fact that the rankings were made separately by the staff members and that they were told beforehand that such rankings would be required from them. After all, the various trainees had been discussed at various staff meetings throughout the project and various trainees compared with each other in these discussions.

Table 37 presents the intercorrelations of staff criterion rankings with various psychological tests that had been selected as promising. Only a single ranking is used from each staff member -- the ranking that appeared most directly directed to job potential. Of especial interest is the fact that the best correlations are obtained between predictor tests and the judgments of the staff member most in contact with the job situation itself (Adler). Also noteworthy is the fact that two of the perceptual-motor tests (included for research purposes) do as good or better in predicting rankings of job potential than general intellectual measures (such as WAIS). The Minnesota Rate of Manipulation Test -- Turning Subtest and the Pursuit Rotor test are relatively poorly related to the rankings of the other staff members who did not see the men in the employment situation.

Normally when one combines judgments from a number of individuals, better prediction with outside measures is expected because of the increased reliability of the combined measure. In this case, judgments from the other staff members appear to weaken the relations found. This again suggests that the MRMT and the Pursuit Rotor are better at predicting features of job success than they are of training success.

A number of other predictor measures gave essentially zero correlations with the job potential rankings. These included the Raven Progressive Matrices, Wide Range Arthmetic Test, Chicago Non-Verbal, Minnesota Paper Form-Board, Peabody Vocabulary Test, and the Checking Sub-test of the CSWSA. The Porteus Maze test was of no use whatsoever since virtually all the trainees scored within a year or so of each other in equivalent mental age.

Criterion Supplement for Table 37

Scatterplots of the correlations between staff rankings and the predictor tests were made and inspected. The small number of cases ruled out statistical tests of linearity or curvilinearity. The Adler job potential rankings showed an interesting pattern with the Crawford, the Pursuit Rotor, the MRMT, the Beta and the WAIS. Those ranked high by Adler generally gave good performances on the predictor tests. But those ranked low scored at all levels from good to poor on the predictor tests. A similar but reduced tendance for this pattern was found with the other staff rankings.

Put another way, poor predictor test performance reliably led to poor judgments of job potential at close of training. Thus, the predictor tests can be used to screen out those for whom training can be of little help. On the other hand, good predictor scores are not in and of themselves diagnostic since the men who get them may or may not be judged as good prospects at the end of training.

Considerations of the "deviant" cases clearly revealed the presence of behavior disorders and unrealistic goal expectations. If assessments of personal adjustment at intake and in early training by the staff psychologist were added to the predictor test scores, even if in a wholistic way, the prediction of good job potential at the end of the program would be markedly improved.

CHAPTER VI

COLLECTION OF NORMATIVE DATA TO SUPPLEMENT TRAINEE TEST RECORDS

Introduction

A major obstacle to the development of any experimentally-sound testing and evaluation program for a vocational rehabilitation or pre-vocational rehabilitation program for young male deaf adults is the lack of relevant normative data for such men. As the first step toward the collection of such critical information, contact was made with a large public Midwestern school for the deaf which preferred to remain anonymous but which was most generous in allowing us contact with their students, records and facilities.

Objective

Our primary objective was to obtain normative data on young deaf males. It should be noted that the sample actually obtained is biased by the omission of two critical groups:

1. Individual less than 21 years of age who left the school environment before the maximum permissable age of attendance either because of accelerated performance OR because of failure to make the anticipated progress with their fellow students.

2. Individuals 21 to 30 years of age who would also fall in the young adult group.

From internal evidence we suspected that most of the individuals who left school before the age of 21 left because of poor academic performance and thus our sample was biased in the direction of the more scholastically inclined and otherwise capable young men and boys.

Age of Deaf School Sample

It was originally hoped that an adequate number of deaf school cases could be obtained who would be in the age 18-21 level. This would have most directly corresponded to the younger level of young deaf adults who seek prevocational or vocational assistance. However, it was necessary to extend the age level downward to increase sample size. The question immediately arises as to whether the tests that were administered are influenced by the age of the subject within the age levels tested. The total sample of 90 plus cases was divided into three equal parts in terms of age at the middle point of the testing period.

Group 1 - Birthdates ranged from December 1944 to December 1946.
Group 2 - Birthdates ranged from January 1947 to June 1948.
Group 3 - Birthdates ranged from July 1948 to December 1949.

Test Procedures

From October 30, 1964 through May, 1965, 90 deaf students ranging in age from 13 years to 21 years were administered a battery of psychological tests. These tests were group administered and were categorized as achievement, intelligence, pencil-paper hand-eye coordination, spatial abilities and mechanical abilities tests.

Test groups

The test groups were made up of 15 to 18 male deaf students. Test time averaged between one and two hours, depending upon the tests scheduled for that group.

Selection of sample

All male students who were in the 10th grade through 12th were selected for testing.

Prior to testing, each student in the above sample was placed in one of the following categories based on admission school records:

A. Age of onset of deafness, birth to 18 months.
   1) Attended only one school for the deaf.
B. Age of onset of deafness, birth to 18 months.
   1) Attended other schools for deaf.
C. Onset of deafness after 18th month of age.

D. Age of onset is unknown.

Many of the deaf students in the sample had a variety of companion disabilities such as cerebral palsy and other-effects of polio.

Homogeneity of sample

All noticeable cases of cerebral palsy were excluded from the sample whose test results are presented in the APPENDIX. Approximately 35 of those tested were deafened before 18 months of age and had attended only the deaf school at which they were tested (Group A); about 41 were also deafened before 18 months of age but had attended other institutions for the deaf (Group B);17 had the onset of hearing loss after 18 months of age (Group C), while 7 more had no known date of onset (Group D.

Analyses of variance were carried out on each test or sub-test comparing Groups A, B, and combined C and D. In no case did the groups differ significantly at the .05 level. In fact, most of the _F_'s were less than 1.0. Thus, no evidence was found to support the possibility that the small variation in age of onset of hearing difficulty within this sample had any effect on the test scores. (It should be noted that even in the case of Group D, it was likely that the loss occurred prior to kindergarten age.) Likewise, no reliable evidence was found for the possibility of test scores being influenced by presence or absence of other deaf school experience.

Data Analysis

Analyses of variance of test score by age were carried out for each test and each subtest.

Table A-14 presented the F's and the group means for the tests showing an age effect. The following tests displayed an age effect: Wide Range Arithmetic Test (.05 level); Primary Mental Abilities -- Words (.05 level), Pictures (.05 level), Verbal(.01 level), Word Groups (.01 level); Chicago Non-Verbal Subtest #1 (.01 level); and Number Checking CSWA. In every case except the Chicago Non-Verbal Subtest #1, the two older groups were not significantly different from each other but scored significantly higher than the youngest group.

Thus, in the various statistical comparisons between the tests presented in the APPENDIX, the number of cases is sometimes about 60 rather than 90 when it seemed desirable to exclude the younger sample. The Chicago Non-Verbal result may be a chance deviation. At any rate, on this subtest the older group did the worst while the two younger groups did not differ from each other.

Table A-7 presents background information on the deaf school sample extracted from school records while Table A-6 provided the index for the column heading of Table A-7. Table A-11 presents an analysis of the intercorrelations among the subtests of the Stanford Achievement Test administered to the students by the school staff prior to our study. Comparison results for a group of normal hearing students of approximately the same academic level is also given.

Noteworthy is the high level of intercorrelation that holds over all subtests for both the normal hearing and the deafened. The subtests may appear to contain different content but the test scores tend to rank the students in a similar fashion for each of the tests. Also noteworthy is the general pattern of agreement between the deaf school sample and the normative sample. The only exception appears to relate to the Spelling subtest which retains a high intercorrelation with the other subtests for the deaf group than it does for the normal hearing.

The Stanford Paragraph Meaning subtest correlated .77 with the Primary Mental Ability Verbal score and a .67 with the Wide Range Arithmetic Test. The Spelling subtest and the Language portion of the Stanford correlated .84 and .76 with the PMA Verbal Test. The Wide Range correlated .92 with the Arithmetic portion of the Stanford. All these correlations are surprisingly high and give little support to the hypothesis that the differently named tests are measuring different attributes. (N=57-59 for the comparisons.)

Distribution characteristics of sample

The tests administered to the deaf school sample were primarily selected on the basis of their suitability for use in a pre-vocational or vocational rehabilitation program. Thus, the possibility existed that spurious correlations between the various tests might result from distorted distributions -- i.e. the tests were not suited for the more capable school sample. Therefore, the distribution characteristics of each test or subtest was examined and is described below:

Distribution characteristics of sample conti.

Primary Mental Abilities -- Elementary Form

Words -- Normal distribution with little peaking, some skewness toward the high scores.
Pictures -- Normal distribution.
Verbal -- Similar to its parts.
Word Groups -- Bimodal distribution.
Picture Groups -- Skewed toward low scores and slight ceiling effect.
Reasoning -- Rectangular distribution.
Spatial -- Some ceiling effect with moderate skewness to low scores.
Perception -- Very wide range with tendency toward rectangular distribution.
Numbers -- Strong ceiling effect

Chicago Non-Verbal Examination

Test 1 -- Skewed to low scores, strong ceiling effect.
Test 2 -- Slight skewness to low scores.
Test 3 -- Normal
Test 4 -- Normal
Test 5 -- High skewed to low scores and strong ceiling effect.
Test 6 -- Bimodal, large range.
Test 7.-- Skewed to low scores, triangular distribution.
Test 8 -- Large range.
Test 9 -- Triangular distribution, strong ceiling effect.
Test 10 -- Skewed to low scores, ceiling effect.

California Survey of Work and Speed Accuracy

All subtests with normal distribution, slight floor effect on Countingletters.

Other test results

Table A-12 presents the intercorrelations for the subtests of the Primary Mental Abilities while Table A-13 does the same for the subtests of the CSWSA.

In addition to the results reported in Tables A-7 to A-14, selected subtests from the test battery for the deaf school population were also compared. The SRA Non-Verbal test correlated .40, .47, .53 and .60 respectively with the PMA Spatial, Figure groups, Perception tests and with Test 2 of the Chicago Non-Verbal. The two forms of the Minnesota Paper Form Board correlated .79. Form A of this test correlated .59 and .55 respectively with PMA Spatial and Test 4 of the Chicago Non-Verbal.

The Wide Range Arithmetic Test correlated .59, .65, .68 and .59, respectively, with CSWSA Number Checking and Letter Counting, the PMA Verbal and Numbers. CSWSA Number Checking correlated .43 with PMA Perception (N=59). CSWSA Code Translation correlated .47 with Test 9, Chicago Non-Verbal. (Test 1 was excluded because of internal evidence of warm-up and delayed comprehension of speed requirements.)

Finger Dexterity correlated .28, and .38 and .42, respectivdly, with the Tapping, Dotting and Line Copying parts of the Mac Quarrie. Letter Counting correlated .39 with PMA Verbal. Mac Quarrie Tracing correlated .44 and .52 with Mac Quarrie Dotting and Pursuit. Tapping correlated .44 with Dotting while copying correlated .62 with Location on this test (N=92).

The Mac Quarrie total score correlated .77 with the Chicago Non-Verbal total score. Correlations between parts of the PMA and the Chicago Non-Verbal were not noteworthy. The Chicago Non-Verbal total correlated .46 with the PMA Verbal factor.

Complete listing of both background and test information is given in the Appendix so that the reader can make whatever further comparisons he may desire. It was our initial intention to also carry out apparatus testing of perceptual-motor skill. We regret that the restrictions of manpower and funds did not permit this important supplement to the psychological testing program. Thus, the reader is cautioned that the test information does not provide the basis for a complete testing program. It lacks personality and cognitive structure measurement as well as indices of perceptual-motor skill. Furthermore, it describes the characteristics of a group of deaf males who are far more capable than the typical vocational rehabilitation case.

CHAPTER VII

CENTER EMPLOYMENT AND PLACEMENT ACTIVITIES

Trainee Placement Problems

The original goal of the project was to train multiple handicapped men, or at least upgrade them sufficiently, for re-referral or referral to their local rehabilitation offices for assistance in job placement or placement in a vocational training program.

In the Summer of 1963 the project assumed the added responsibility of actively entering into placement activities normally left to the DVR liaison officer and the local DVR offices.

The several reasons underlying this move evolved from the idea that placement of the type of deaf from this project required intensive participation by an individual who was intimately aware of the needs and short-comings of the deaf and who could pursue placement leads and serve as a mediator client between the deaf man and the employer. Because of the heavy client caseload of the various DVR Placement Coordinators, this was viewed by the project administration as a positive step toward assisting both DVR and the deaf client in obtaining more rapid employment and follow-up assistance.

Eventually, DVR withdrew its liaison coordinator and the project job placement coordinator assumed the major role of searching out job placements and affecting placement and follow-up work.

In time several negative factors of the decision became apparent. The added responsibility removed a valuable teacher from the classroom. At the same time DVR was functionally eliminated from the list of community contacts and lost as a valuable source of needed advice and assistance. The added cost of this activity was debilitating to the training goals of the project.

Trainee placement, per se, was vastly aided by a period of booming economy. Under such favorable conditions of manpower shortage -- especially manpower willing to take on low-level, low-paid service jobs -- no realistic estimate of relative placement effectiveness can be made.

The decision to emphasize placement in relation to training was one that emphasized short-term goals at the cost of long-term objectives. On the other hand, the instrumental staff had apparently become less optimistic about the possibilities of achieving profound training improvement. The decision may also have been influenced by the change in the type of trainee that came to the Center later in the project. Of the first 17 trainees, 14 had 12 or more years of education; of the last 16 trainees, 10 had less than 9 years of education and several were illiterate.

Work Experience Training (Job Sampling)

The job development technique most often used for setting up work experiences and training situations involved project staff assistance answering newspaper help-wanted ads by telephone, letters, or person-to-person calls. Situation-wanted ads were used by the Center to indicate that deaf men desired specific or general types of employment. As more possible employers learned about the program, certain types of job opportunities became more plentiful.

The jobs available were limited to entry level service jobs such as kitchen service work, office and apartment custodial care. Additional areas sampled were: sorting and mailing (in an office), rough carpentry, house painting and lumber loading.

Some common questions from possible employers concerned the lipreading and writing abilities of the deaf men, and the capability of interaction with hearing employees. There were few, if any, inquiries about the working ability of the men or about factors related to safety in a work situation.

The amount of time the Center placement coordinator spent with each trainee assisting him on his job adjustment varied from as little as one hour a week to daily visits over a period of two or three weeks. The time required depended upon the individual problems of the trainee, the nature of the work he was doing and his aptitude for social adjustment. Frequently, it was necessary for the coordinator to show the trainee how to do the work; i.e. explain the work requirements and work along with him for a time as well as act as an interpreter for both the employer and the trainee.

Some trainees had to be shown how to punch time clocks or maintain time sheets. Occasionally it was necessary for the coordinator to trail a bus in which the employee was riding to his place of work for the first time to ensure that he knew how and where to go.

Most of the trainees were assisted in cashing their paychecks and depositing money in savings or checking accounts.

Although it took a good deal of job development to create a training situation, the employers were very understanding and did not renege on their employment promises -- even though there were instances when the men did not give the employer adequate service.

The major placement problem arose from the fact that often the trainee resisted the possibility of employment. It would seem this behavior reflected a deep fear of new, untried experiences.

The types of common problems encountered in placement centered around punctuality, regularity of attendance and notification to the employers of absences. Employers seldom complained of the quality of the work, but did often complain about the quantity of work and the inability of the men to keep busy and work unsupervised.

It would seem that these various experiences reinforced the idea that pre-employment tryout training was an important factor as a readying and stabilizing influence leading to permanent employment

Table 38 lists the numbers and types of job experiences each trainee was placed on in the last stages of his program, or when he was released from the program.

It will be noted that a large number of trainees placed on jobs directly from the Center had more than 4 work situations brought about by dismissal, job dissatisfaction, inability to adjust to the job, etc.

The Center placement coordinator's philosophy toward this high frequency job loss through dismissal was that it was a good learning experience since most of the trainees had never had work experience or learned to work along with other persons -- these situations were primarily tryout types of jobs and were not thought of as permanent.

When a trainee was dismissed for some work or business violation, he was immediately counseled. His mistakes were pointed out to him. Every effort was made to obtain another work situation as quickly as possible in order to test his understanding of his mistakes and how readily he would correct them.

Social Maturity of the Trainees

Social maturity plays a major role in one's ability to survive in society in general and in job situations in particular.

Early observations of the trainees and the types of problems they encountered and created daily bore out the impression that, for the most part, the men were extremely immature emotionally and socially.

Table 39 shows the results obtained measuring social maturity according to Vineland standards. These Vineland scores were casually compared with results obtained from the Bender-Visual Motor Gestalt. No effort was made to compute correlations, however, it is visually evident to the reader that the standards used for judging maturity based on B-G visual perception differ widely from those performance items rated on the Vineland used to equate social maturity.

Again, because of the few number of cases involved was difficult to advance any explanations as to why the wide disparity in percentile rankings on the B-G and the Vineland S-M Scale.

APPENDIX A

TABLE A-1

INDEX TO TESTS GIVEN TO PROJECT TRAINEES

1. WAIS (Wechsler Adult Intelligence Scale)
    - a. Performance score
    - b. Digit symbol
    - c. Picture completion
    - d. Block design
    - e. Picture arrangement
    - f. Object assembly
    - g. Retest - Performance score
    - h. Retest - Digit Symbol
    - i. Retest - Picture completion
    - j. Retest - Picture arrangement
    - l. Retest - Object assembly

2. Beta
    - a. Original rating
    - b. Retest rating

3. Chicago Non-Verbal Examination
    - a. Original total
    - b. Retest total

4. Raven Matrices
    - a. Original total
    - b. Retest total

5. Leiter International Performance Scale
    - a. Pathways
    - b. Stencil
    - c. Painted cubes
    - d. Total
    - e. Pathways, retest
    - f. Stencil, retest
    - g. Painted Cubes, retest
    - h. Total, retest

6. Crawford Dexterity Test
    - a. Part I, in seconds
    - b. Part II, in seconds
    - c. Retest, Part I, in seconds
    - d. Retest, Part II, in seconds

7. Minnesota Rate of Manipulation Test, Turning Test, Total for four trials in seconds

8. Pursuit Rotor - time on target in blocks of five, 15 sec. trials
    - a. Subtest 1
    - b. Subtest 2
    - c. Subtest 3

9. Iowa Reading Test

10. CSWSA (California Survey of Work and Speed Accuracy)
    - a. Number checking
    - b. Code transmission
    - c. Finger dexterity
    - d. Counting

11. Wide Range Arithmetic Test
    - a. Original
    - b. Retest

12. Minnesota Paper Form Board
    - a. Part AA
    - b. Part BB

13. Porteus Maze, Mental Age Equivalents

14. Stanford Achievement Test
    - a. Test form used
    - b. Date, month/year
    - c. Paragraph Meaning
    - d. Word Meaning
    - e. Spelling
    - f. Language
    - g. Arithmetic Reasoning
    - h. Arithmetic Computation
    - i. Social Studies
    - j. Science
    - k. Study Skills
    - l. Arithmetic Concepts
    - m. Arithmetic Application
    - n. Arthmetic
    - o. Vocabulary

* indicates that science and social studies tests were combined

15. MacQuarrie Test for Mechanical Ability
    - a. Tracing
    - b. Tapping
    - c. Dotting
    - d. Copying
    - e. Location
    - f. Pursuit

Block test was eliminated

Table A-1 continued

16. Perceptual closure
    a. House
    b. Figure

17. Obscured objects
    a. Part I
    b. Part II

18. DAT Mechanical Reasoning Test

19. Wisconsin Card Sorting Test
    a. Total errors
    b. Number correct
    c. Perseverative errors
    d. Non - perseverative errors
    e. Unique responses

F = failed to meet 1st criterion

20. Hoke and Retherford Experimental Tool Identification Test
    a. Part I?
    b. Part II?
    c. Part III
    d. Part I, retest
    e. Part II, retest
    f. Part III, retest

21. Geist - F. Scores
    a. Persuasive
    b. Clerical
    c. Mechanical
    d. Scientific
    e. Outdoor
    f. Literary
    g. Computation
    h. Artistic
    i. Social service
    j. Dramatic

22. H-R Experimental Color Form Test
    a. Total of ten trials for color in seconds
    b. Total of ten trials for form in seconds
    c. Total of ten trials for color, retest
    d. Total of ten trials for form, retest
    e. Box test
    f. Box test, retest

23. Peabody Picture Vocabulary Test
    a. Form A, original
    b. Form A, retest
    c. Form B, original
    d. Form B, retest

TABLE A-2

TEST SCORES OF PROJECT TRAINEES

Subject Number	1a	1b	1c	1d	1e	1f	1g	1h	1i	1k	1l	1m
1	52	37	13	44	24	36						
2	63	42	20	41	24	43	63	42	18	46	29	41
3	39	24	9	28	14	36	49	42	16	37	12	38
4	53	40	14	42	24	38						
5	50	51	16	29	20	37						
6	54	48	17	37	22	38						
7	52	47	14	42	16	39						
8	33	18	6	26	12	30	32	26	8	20	8	32
9	28	19	9	18	14	18	26	36	6	27	12	28
10	57	36	15	41	26	42	57	52	15	41	16	43
11	41	47	9	26	26	21	48	44	10	24		
12	47	55	16	27	12	37	47	55	16	30	20	26
13	45	30	16	39	22	24						
14	46	35	15	35	13	35						
15	52	47	16	38	20	37						
16	49	56	17	34	14	34						
17	42	43	14	28	16	26						
18												
19	49	56	16	32	18	32	44	32	16	29	16	31
20	38	29	9	28	12	31						
21	33	39	13	16	8	26	34	37	12	20	12	21
22												
23	43	33	14	26	20	31	43	31	10	37	20	30
24	47	22	14	36	27	34	49	26	18	36	24	33
25	54	50	13	45	20	38	58	60	16	37	18	43
26	39	58	14	14	8	29	38	48	10	20	8	35
27	54	43	14	45	20	38	61	46	15	48	26	40
28	32	26	8	28	6	30	37	17	11	33	16	34
29	36	34	11	30	14	22	43	41	11	28	16	34
30	56	39	17	35	24	42	60	47	17	31	30	42
31	63	29	18	39	34	42	62	37	16	45	31	43
32	37	46	10	28	8	25	37	45	12	29	8	24
33	36	15	12	24	22	26	39	19	11	24	27	29

TABLE A-2, continued

Subject Number	2a	2b	3a	3b	4a	4b	5a	5b	5c	5d	5e
1	110				54		24	23	30	77	
2	93	119	139		49	43					
3	91	101	129		30	33	6	16	7	29	
4	105				40						
5	106				35	42					
6	103				36	25					
7	93				37						
8	67	79	74	65	15	17	2	10	0	12	0
9	70	76	40		9	13	2	6	3	11	
10	100	129	107		38	43					
11	94	101			38	48					
12	101	107	125	140	34	35	16	10	2	28	
13	111	115			41						
14	110	106	128		41	45	10	15	5	30	
15	105	116	124		36	49	10	19	17	46	
16	98	109	117		23	43					
17	107				44						
18											
19	95	89	92	113	34	23	0	11	4	15	12
20	78	86	52		17	20	2	6	3	11	
21	92	96	101	107	22	30	8	2	2	12	4
22	108				43						
23	90	94	110	114	42	46	8	15	5	28	6
24	87	89	119	92	35	38	6	14	3	23	8
25	100	114	135		46	48	12	16	18	46	16
26	76	75	76	90	16	21	6	12	5	23	0
27	101	104	129	125	39	49	8	18	7	33	8
28	79	89	72	94	36	41	4	20	4	28	4
29	73	80	91	104	10	32	6	2	3	11	12
30	84	91	120	124	33	41	10	19	5	34	16
31	69	99	72	136	34	45	12	16	5	33	18
32	90	78	122	86	19	20	8	0	14	22	14
33	69	70	61	81	31	28	0	8	2	10	2

TABLE A-2, continued

Subject Number	5f	5g	5h	6a	6b	6c	6d	7	8a	8b	8c
1				280	425			263	26	33	50
2				403	415	295	343	227	12	42	66
3				417	588	222	481				
4				305	322				45	61	61
5				337	468						
6				461	433						
7				426	524						
8	14	2	16	531	885	317	910	334	9	19	19
9				475	622	365	640	419	40	50	63
10				328	454	377	526		45	64	79
11				480	548	300	600				
12				330	570	341	590	250	23	41	56
13				392	509						
14				458	750			373	1	6	17
15				360	422			240	30	49	62
16				323	527						
17				425	515						
18				495	892				13	28	38
19	8	2	22	313	464	255	469	273	32	40	45
20				290	403	319	390	243	53	63	69
21	12	5	21	434	401	348	443	247	17	31	15
22				295	373						
23	19	10	35	499	389	426	545	359	2	4	7
24	20	5	33						3	5	5
25	7	21	44	265	390	208	343	233	77	92	104
26	2	3	5	325	690	337	520	311	36	57	63
27	15	19	42	375	420	322	495	215	13	50	63
28	17	5	26	645	1005	436	539	286	2	5	9
29	9	2	23	360	668	350	725	455	3	6	7
30	21	10	47	355	770	308	660	234	16	37	40
31	2	21	41	627	895	365	728	367	1	4	7
32	15	3	32	345	540	490	715	339	20	31	42
33	10	2	14	409	777	555	622	338	24	33	44

TABLE A-2, continued

Subject Number	9	10a	10b	10c	10d	11a	11b	12a	12b	13
1	A					42	59	39		
2	E	56		345	17	24	33	44		
3	E					10	28			
4	E					20	35			
5	E					11	17			
6	E					7	20			
7						14				
8	E	35	38	316	7	6	8	8	18	15.5
9	E	47		480	12	19	15	6		
10	E					19	32			
11	E					22	33			
12	E	83		488	24	15	27	38		16
13	A					44				
14	E	52		554	28	14	21	30		16.5
15	E	55		766	15	16	19	44		15
16	E					12	26			
17	A					44				
18										
19		44	67	598	6	18	16	3	18	14
20		23		190	9	6		0		15.5
21	E	59		194	28	13	11	24	12	11
22	E					8				
23	E	52		96	20	14	19	23	29	12.5
24		37		-199	16	32	23	23		15
25		72	102	476	24	27	30	33	37	16
26		44	103	-236	18	7	12	5	2	14
27		42	68	646	24	29	45	37		17
28		43	56	440	6	8	10	9	27	16
29		66	84	680	25	19	19	34	22	13.5
30		66	79	390	18	10	16	30	38	15
31		55	46	420	23	19	17	39	38	15
32		37	84	648	2	2	6	33	19	15
33		39	38	206	9	9	9	16	7	11.5

TABLE A-2, continued

Subject Number	14a	14b	14c	14d	14e	14f	14g	14h	14i	14j	14k	14l
1	K-J	5/63	6.3	6.2	10.0	8.1	8.8	9.0	8.9	8.3	7.0	
	A-J	10/63	6.7	7.7	10.7	11.2	9.5	9.6	8.3	6.1	10.1	
2	E-J	5/63	3.4	2.5	3.7	4.0	4.6	5.7				
	A-J	8/64	3.5	4.0	4.8	2.8	5.2	6.6	4.7	3.2	4.1	
3	E-J	5/63	2.3	2.8	2.9		2.2	4.4				
	I-J	7/64	2.6	3.3	3.5	3.1	4.0	5.7	4.0	1.6	3.4	
4	K-J	5/63	2.7	2.4	5.9	0	4.6	6.8	4.2	4.1	4.5	
	I-J	10/63	3.2	2.0	5.8	3.1	3.9	6.8	4.4	4.3	5.2	
5	E-J	5/63	3.2	3.1	3.4	0	3.2	5.3				
6	I-J	5/63	2.5	3.9	4.6	0	4.4	4.5	4.8	3.0	4.4	
	E-J	10/63	3.1	3.3	3.9	1.2	3.2	5.0				
7												
8	E-J	5/63	1.5	2.4	2.0	0	1.9	2.8				
	PI-X	11/64	1.4	1.6								
9	E-J	6/63	3.0	2.8	4.5	2.5	2.4	4.2				
	E-J	9/64	3.0	2.8		1.8						
10	E-J	5/63	3.0	2.6	4.0	0	3.9	5.3				
	I-J	8/64	3.7	2.7	6.2	2.6	4.6	5.6				
11	I-J	5/63	5.4	4.8	9.6	6.5	5.1	5.8	6.2	5.0	4.9	
	A-J	4/64	6.2	5.5	4.9	7.0	5.6	6.1	7.5	6.0	5.2	
12	I-J	5/63	4.5	3.6	8.3	7.0	3.5	6.4	4.8	3.5	5.0	
	A-J	8/64	6.7	3.6	7.7	6.3	4.6	6.6	4.9	3.2	4.8	
13	I-J	5/63	4.3	4.0	7.9	7.4	5.3	6.6	4.8	4.1	4.7	
	I-J	10/63	3.5	4.2	7.9	6.5	6.2	7.6	5.3	4.9	5.0	
14	I-J	6/63	4.6	3.9	5.3	2.9	4.2	4.0	5.0	3.2	4.2	
	A-J	8/64	3.9	3.8	5.9	4.5	4.8	5.5	5.0	4.0	3.2	
15	E-J	10/63	3.3	2.3	3.0	0	3.6	4.2				
	P-J	10/64	2.7	2.5	3.5		3.4	4.5				
16	E-J	10/63	2.8	2.5	4.1	0	3.8	4.8				
	I-J	6/64	3.1	3.4	3.8	2.1	4.3	5.3	4.1	3.2	3.4	
17	I-J	10/63	5.6	4.5	9.5	4.5	6.2	7.6	6.2	5.6	5.3	
18	P-J	10/64					1.5	2.1				

TABLE A-2, continued

Subject Number	14a	14b	14c	14d	14e	14f	14g	14h	14i	14j	14k	14l
19	P-J	10/64	2.3	2.4	1.5	2.3	4.4	3.4				
	P-II-X	2/65	1.8	2.1		2.2		3.0				
20	P-J	10/64	2.0	1.9	1.1		1.8	2.0				
21	E-J	2/64	2.1	3.2	3.7	(1	2.3	3.0				
	E-J	10/64	3.7	2.5		(1	2.2	3.3				
22	E-J	2/64	3.4	2.7	4.2	1.8	3.5	3.6				
23	E-J	2/64	2.4	2.4	3.5	1.0	2.8	3.5				
	P-II-X	2/65	2.4	2.7		2.5		4.0				
24	P-J	10/64	4.6	3.7	4.4		4.0	3.9				
	I-I-X	2/65	4.4	3.8	8.0	7.5		6.2	5.6	4.5		5.5
25	P-J	10/64	2.3	2.6	3.0		4.3	4.4				
	PII-W	8/65	2.6	2.0		2.5		5.8	*2.0	2.0		4.5
26	PI-X	11/64	1.6	1.1								
	PII-W	8/65	1.8	1.5				2.6				1.6
27	PI-X	11/64	1.5	1.8				7.5				
	PII-W	8/65	1.9	2.0		2.6		7.0	*1.4	1.4		3.8
28	P-J	10/64					1.5	2.1				
	PII-W	8/65	2.6	2.3		2.1		2.8	*2.2	2.2		2.3
29	PI-X	2/65	1.7	2.3	1.8			1.6				
	PI-W	8/65	2.0	2.1								
30	PI-X	2/65	1.9	2.1	2.1			1.5				
	PI-W	8/65	2.0									
31	PII-X	8/65	3.1	3.0		3.1		4.8		1.4		3.1
32	PI-X	8/65	1.6									
33	PI-X	2/65	1.7	1.6								

TABLE A-2, continued

Subject Number	14m	14n	14o	Subject Number	14m	14n	14o
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24	5.8		
9				25			
10				26			
11				27			
12				28			
13				29		2.2	1.6 1.3
14				30		1.7	1.2 1.3
15				31			
16				32		1.2	2.0
				33			

TABLE A-2, continued

Subject Number	15a	15b	15c	15d	15e	15f	16a	16b	17a	17b	18
1									160	465	33
2							111	28	240	351	23
3											22
4											
5											
6											35
7											
8	24	16	17	30	3	11	65	97			
9							95	90	144	275	
10											26
11											12
12	28	34	15	16	19	24	27	40	45	55	5
13											40
14	22	27	16	19	11	18	45	45	70	225	6
15							40	55	30	90	8
16											8
17											0
18											
19	32	28	15	20	2	19	45	56			
20	16	29	3	11	8	6	65	45	692	351	
21	18	19	15	5	6	12	55	70	213	229	12
22											21
23	11	30	8	12	13	6	85	60	199	37	-2
24	8	12	7	13	7	3	70	50	265	550	
25	38	40	20	40	34	24	20	25	100	412	
26	22	10	18	13	0	7	64	165			
27	25	28	15	7	11	5			60	150	
28	9	15	11	11	4	4	87		170	150	
29	24	24	19	17	14	11	82	97	110	152	
30	25	29	11	29	24	15	61	56	41	65	
31	13	12	3	28	15	10	40	43	33	91	
32	16	19	15	7	6	8	85	56	77	307	
33	16	21	9	4	1	8	84	42	180	460	

TABLE A-2, continued

Subject Number	19a	19b	19c	19d	19e	20a	20b	20c	20d	20e	20f
1	33	24	16	17	5	56	63	57			
2	8	6	5	3	0	42	47	62	46	48	58
3	42	12	18	21	10	23	29	59	37	45	60
4	F	F	F	F	F	51	55	59			
5						34	41	56			
6						41	53	56			
7						18	16				
8	41	34	28	12	2	16	19	36	29	19	36
9	41	20	27	14	0	36	31	45	28	25	51
10						34	41	57	55	59	60
11						37	57	53	63	45	61
12	22	8	15	6	3	37	34	42	42	52	58
13						57	64	58			
14	31	8	12	19	2	34	31	40	38	32	58
15	F	F	F	F	F	34	37	58			58
16						26	23	49	33	51	54
17						46	65	53			
18						25		25			
19	57	30	23	34	13	27	25	34			52
20	F	F	F	F	F			42			44
21	F	F	F	F	F	36	42	52	36	56	58
22						39	54	54			
23	74	33	29	45	18	40	39	58	47	47	57
24	65	44	23	42	23	54	65	62	47	63	63
25	24	18	19	5	1	41		53	40	44	56
26	54	15	41	13	1	19	12	43	22	16	43
27	F	F	F	F	F	16	26	59	49	50	61
28	60	31	57	3	0	31	46	49	31	43	53
29	F	F	F	F	F	26	35	37	29	27	50
30	52	50	46	6	0	28	40	53	45	49	58
31	93	34	66	27	5	30	52	54	25	52	54
32	53	20	30	23	12	16	19	49	34	24	51
33	35	10	16	19	14	1	0	51	26	36	45

TABLE A-2, continued

Subject Number	21a	21b	21c	21d	21e	21f	21g	21h	21i	21j
1	52	54	40	76	52	40	57	40	50	59
2	35	40	60	39	44	49	53	66	37	42
3	42	40	70	58	39	40	65	49	44	42
4										
5										
6										
7										
8	54	40	31	58	70	49	58	52	57	59
9	42	47	41	64	55	57	51	49	44	59
10										
11	60	61	45	45	49	75	43	49	64	59
12	42	54	60	58	39	57	43	66	44	42
13										
14	54	61	36	51	49	57	36	59	50	59
15	60	54	36	39	49	57	51	52	64	59
16	48	34	55	64	60	49	51	42	50	42
17										
18										
19	35	47	50	58	65	49	43	42	37	42
20										
21										
22	54	61	26	45	39	57	43	59	50	42
23	42	54	50	45	49	66	43	56	50	42
24										
25	54	54	55	45	55	66	36	45	57	75
26	54	61	41	45	65	66	43	35	64	59
27	60	61	36	58	49	57	43	58	57	75
28	48	47	60	45	44	49	58	52	50	59
29	48	40	60	58	65	40	43	45	50	42
30	54	54	50	39	44	40	65	45	57	75
31	48	75	36	51	44	75	58	56	44	42
32	60	40	36	58	65	49	43	45	64	42
33	48	47	50	45	44	49	51	59	50	42

TABLE A-2, continued

Subject Number	22a	22b	22c	22d	22e	22f	23a	23b	23c	23d
1	128	125			120					
2	121	120	113	109	49	33	44		45	
3	138	116	132	121	93	33				
4										
5										
6	105	119								
7										
8	139	131	119	118	812		19		11	
9	205	163					33		37	
10	97	96	88	94	48	43	48		52	
11	120	108			199					
12	129	114	106	103	132	76	63		57	
13										
14	140	128	160	147	59	319	44		50	
15	112	95			51		30		36	
16	136	129	96	106	742	110				
17										
18	247	171	176	178			6			
19	152	151	165	132	140	130	9	13	11	
20	270	165	154	142	772		4		2	
21	153	135	142	136	592	835	51		69	
22	124	115			227					
23	126	120	115	114	300	19	41		39	
24	230	226	192	181	58	45	70		83	
25	101	94	88	93	35	56	40	46	41	47
26	167	149	132	129	225	106	15	12	7NB	NB
27	95	87	108	96	15	79	31	34	21	39
28	222	292	182	191	142	305	44	48	55	58
29	154	109	124	129	140	70	24		36	39
30	149	161	148	133	503	245	40	40	39	42
31	194	162	118	103	900	27	44	46	56	60
32	125	129	169	149	250	183	9	8NB	9	10
33	184	154	171	168	758	520	18	22	12	

NB - No basal level obtainable

TABLE A-3

INTERCORRELATIONS OF WAIS SUBTESTS FOR THE PROJECT TRAINEES AND FOR A COMPARISON GROUP OF YOUNG ADULTS*

	BD	OA	PA	DS	PC
Block Design	+.61 (.86)	.67 (.56)	.60 (.60)	.14 (.40	.46 (.61)
Object Assembly		.88 (.65)	.44 (.48)	.26 (.32)	.60 (.51)
Picture Arrangement			.84 (.66)	-.09 (.50)	.49 (.54)
Digit Symbol				.68 (.92)	.50 (.42)
Picture Completion					.70 (.82)

* The numbers in parenthesis are the intercorrelations obtained from a sample of 100 males and 100 females, age 16 - 17, reported on page 255 of Wechsler, D. The measurement and appraisal of adult intelligence. Baltimore: The Williams & Wilkins Co., 1958.

+ Diagonal entries are test-retest reliabilities based on intake and release testing. Diagonal entries in parentheses are reliability coefficients for 200 males and females, age 18 - 19, from Ibid, page 103.

TABLE A-4

INTERCORRELATIONS AMONG SEVEN MEASURES OF GENERAL INTELLIGENCE FOR PROJECT TRAINEES

	WAIS	Beta	Chicago	Raven	Leiter	Stanford	Peabody
WAIS Perf. Sc.	.94	.71	.60	.66	.39	.42	.07
Beta		.53	.71	.73	.71	.52	.48
Chicago Non-Verbal			.52*	.64	.67	.31	.34
Raven Matrices				.76*	.78	.54	.45
Leiter Adult					.45*	.62	.34
Stanford - Paragraph Meaning						.92*	.57
Peabody							.94

*Test-retest reliability

NUMBER OF CASES PER COMPARISON

	WAIS	Beta	Chicago	Raven	Leiter	Stanford	Peabody
WAIS Perf. Sc.	20	25	25	31	21	30	20
Beta		25	23	25	20	31	20
Chicago Non-Verbal			15	25	20	25	20
Raven Matrices				26	21	31	20
Leiter Adult					14	21	20
Stanford - Paragraph Meaning						19	20
Peabody							20

TABLE A-5

INTERCORRELATIONS AMONG TESTS OF PERCEPTUAL-MOTOR SKILL FOR PROJECT TRAINEES

	Crawford	Minnesota Manipulation	Pursuit Rotor	MacQuarrie	CSWSA
Crawford Dexterity	.63+	.47	-.62	.01	-.08
Minnesota Rate of Manipulation Test		-	-.36	-.37	-.01
Pursuit Rotor			.93*	.36	.02
MacQuarrie Mechanical Ability				-	.24

* Trial block 1 - 2 intercorrelation

+ Test-retest reliability

NUMBER OF CASES PER COMPARISON

	Crawford	Minnesota Manipulation	Pursuit Rotor	MacQuarrie	CSWSA
Crawford Dexterity	20	20	23	16	19
Minnesota Rate of Manipulation Test			20	16	19
Pursuit Rotor			24	17	20
MacQuarrie Mechanical Ability					17

TABLE A-7

BACKGROUND
INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	Birthdate	1	2a	2b	3a	3b	4a	4b	5a	5b
1	6/14/46	A	139	3/58	75-90	3/58	11	B	9	A
2	3/20/46	A	76	5/58	1-5	3/58	5	C	4	D
3	7/7/45	A	100	3/58	25±49	3/58	11	C	9	C
4	10/24/46	A			11-25	5/61	4	D	4	E
5	10/29/46	A	100	4/59	75-90	4/59	9	C	7	B
6	11/28/46	A			50-75	4/59	5	D	4	D
7	12/13/46	A	97	2/59	75-90	4/59	5	C	6	D
8	10/7/46	A	103	4/59	75-90	4/59	9	C	8	B
9	9/6/46	A	89	3/63	0-5	5/61	4	D	4	E
10	11/8/46	A	87	2/59	25-50	4/59	4	E	4	D
11	1/18/46	B	114	3/58	75-90	3/58	8	B	9	B
12	8/18/46	A	115	3/59	90-95	4/59	11	C	9	C
13	9/26/45	B	83	3/58	11-25	4/57	4	C	4	C
14	12/14/46	B	121	3/59	25-50	4/59	9	C	7	C
15	11/9/45	B	121	3/58	50-75	4/57	11	C	9	C
16	12/2/44	B			50	4/57	11	C	9	C
17	6/8/46	B					5	D	4	D
18	11/13/46	B	86	2/59	50	4/59	5	C	6	D
19	11/1/46	B					4	C	-	D
20	6/23/46	B	112	3/58	25-50	3/58	8	A	9	A
21	8/30/46	C	90	8/59	1-5	8/59	4	C	4	C
22	10/10/45	C			51-75	3/60	11	C	9	C
23	2/20/46	C	79	2/59	10-25	4/61	4	E	4	E
24	11/26/46	C	104	4/59	5-10	4/59	9	C	7	C
25	10/20/45	C	99	11/62	1-5	5/61	11	A	9	C
26	9/30/46	D	82	3/59	1-5	4/59	5	D	6	C
27	7/31/45	B	129	10/57	75-89	3/57	11	C	9	C
28	4/29/47	A	113	11/59	26-49	12/59	7	B	6	D
29	7/10/47	A	132	10/59	95+	12/59	9	A	8	A
30	7/12/47	A	111	10/59	51-74	12/59	9	C	8	B
31	2/7/47	A	111	2/59	50	4/59	5	C	6	D
32	2/14/47	A	99	4/59	25-50	4/59	9	C	7	B
33	3/17/47	A	104	12/59	90-94	12/59	9	B	7	B

TABLE A-7, continued

BACKGROUND
INFORMATION ON A DEAF-SCHOOL SAMPLE

Sample Number	Birthdate	1	2a	2b	3a	3b	4a	4b	5a	5b
34	7/15/47	A	103	11/59	10-25	12/59	4	D	4	E
35	3/17/48	A	97	3/61	25-50	2/61	6	D	7	C
36	4/25/47	A	87	12/59	1-5	12/59	5	inc.	4	D
37	6/23/47	A	69	11/59	6-10	12/59	5	C	4	D
38	3/11/47	A	122	3/59	75-90	4/59	9	D	7	B
39	4/22/47	B					9	B	7	C
40	4/26/48	B					6	D	7	C
41	10/9/47									
42	2/8/47	B					7	B	6	D
43	6/11/47	B	100	8/63			4	C	4	D
44	8/22/47	B	90	11/59	6-10	12/59	5	C	6	D
45	4/27/48	B	100	9/57	50	12/58	3	E	-	E
46	1/2/47	B	106	3/58	10-25	3/58	8	B	9	A
47	12/29/47	B			1-5	4/61	8	D	7	C
48	7/14/47	B	107	11/62	25-50	11/62	8	C	9	C
49	3/16/47	B					7	D	6	D
50	6/3/47	B			6-10	5/61	7	D	6	C
51	4/28/47	C	93	11/59	26-49	11/59	7	C	6	D
52	11/15/47	C	104	12/57	11-25	4/61	6	C	7	D
53	12/4/47	B	110	7/56	25-50	4/61	8	D	7	B
54	1/19/48	B					4	C	4	B
55	4/30/48	C	90	3/61	25-50	2/61	5	inc.	4	D
56	4/25/47	C	131	11/62	25-49	11/62	8	B	9	C
57	10/30/47	C	122	11/62	75-90	11/62	8	C	7	D
58	11/28/47	D	113	11/63	95-99	11/62	9	C	8	B
59	5/4/48	D	111	3/61	75-90	2/61	7-8	A	8	B
60	6/6/47	D	115	4/59	10-25	4/59	5	D	4	D
61	7/20/48	A	111	2/61	50-75	2/61	6	D	7	C
62	8/10/48	A	108	3/61	50-75	2/61	8	C	7	B
63	4/16/49	A	103	5/61	26-49	4/61	5	D	5	B
64	11/29/49	A	87	9/62	10-25	9/62	4	C	5	D
65	11/3/49	A	96	9/62	50-75	9/62	4	D	5	C
66	2/21/49	A	96	4/61	25-50	9/62	4	C	4	C

TABLE A-7, continued

BACKGROUND INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	Birthdate	1	2a	2b	3a	3b	4a	4b	5a	5b
67	9/5/48	A	111	5/58	50-75	2/61	6	D	7	C
68	8/21/48	A	121	3/61	50-75	2/61	7-8	A	8	C
69	12/16/48	A	96	4/61	6-10	3/61	4	inc.	4	D
70	3/19/49	B					4	C	4	D
71	7/3/49	B	108	9/62	25-50	9/62	4	E	4	E
72	6/4/49	B	104	9/62	25-49	9/62	5	D	5	C
73	9/7/49						5	D	5	C
74	1/27/49	B					5-6	C	5-6	B
75	2/11/49	B	110	4/61	III+	2/61	6	B	7	C
76	11/12/49	B	79	5/63	11-25	9/62	2	E	-	E
77	7/2/48	B	139	3/61	75-90	2/61	8	A	8	B
78	12/16/48	B	69	4/63			5	B	5	C
79	12/31/48	B	96	9/62	1-5	9/62	4	C	4	C
80	5/1/49	B			V	5/64	4	C	4	B
81	12/29/48	B					6	D	6	D
82	8/2/48	B	83	11/62			2	E	-	D
83	2/3/49	B	99	9/62	6-10	4/61	6	C	6	C
84	3/11/49	B	104	9/62	25-50	9/62	4	C	4	C
85	11/28/49	B	62	10/58	1-5	9/62	2	E	-	E
86	6/15/49	B			III	4/64	6-7	B	6-7	C
87	11/15/48	B	85	9/62			4	C	4	C
88	11/19/48	C	122	4/61	III	2/61	6	D	6	D
89	12/16/48	C	75	9/62	1-5	2/61	4	D	4	E
90	9/27/48	D	83	9/62	11-25	9/62	6	D	6	D
91	7/5/49	D	65	9/62	1-5	9/62	5	D	5	B
92	7/1/48	D	132	3/61	50	2/61	8	A	8	B
93	8/5/48	A	125	3/61	50-75	2/61	8	A	8	B
94	9/9/50	C	117	9/62	50-75	9/62	6	D	6	C
95	11/15/51	B	118	3/60	95-99	5/60	6	B	6	A

TABLE A-7, continued

BACKGROUND
INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	6a	6b	7a	7b	7c	7d	7e	7f	7g	7h
1	9	A	8.11	Xadv	7.4	-	9.6	9.3	-	12.9
2	5	C	8.10	I-L	5.0	3.6	5.3	1.9	4.3	5.3
3	9	D	19.10	Xadv	6.5	-	8.4	6.8	-	10.4
4	6	C	18.2	I-L	3.6	3.2	3.8	2.2	3.8	3.5
5	8	C	18.0	Wadv	6.4	-	7.2	-	-	-
6	5	D	18.2	I-L	2.4	2.4	3.2	3.1	4.4	3.2
7	6	C	18.1	I-L	3.2	3.6	5.2	3.7	5.1	6.0
8	9	C	18.7	adv-X	6.0	-	7.6	-	-	12.1
9	6	D	18.4	I-L	3.4	3.3	5.0	1.9	4.5	3.8
10	6	C	18.1	I-L	3.9	3.7	3.4	3.1	6.7	5.2
11	-	-	18.1	A-L	8.3	5.3	8.4	7.6	7.0	7.0
12	9	C	18.9	adv-X	6.4	-	11.5	6.2	-	12.7
13	6	C	19.3	I-L	4.2	4.0	8.1	5.2	4.6	5.9
14	9	C	18.1	I-N	4.1	3.9	7.0	4.4	-	6.8
15	9	C	19.5	adv-X	7.4	-	7.8	8.6	-	11.5
16	9	B	19.0	A-L	4.8	5.8	7.3	8.8	10.4	11.4
17	5	D	18.7	I-L	2.3	4.0	3.8	1.0	4.8	4.9
18	6	B	18.2	I-L	4.8	3.7	5.0	1.3	4.5	5.5
19	6	C	18.0	I-L	3.9	3.4	6.0	1.0	-	5.9
20	9	C	18.9	I-L	5.8	5.6	7.1	8.5	7.4	8.5
21	6	C	18.6	I-L	4.2	3.3	3.7	3.4	5.3	6.1
22	9	D	19.2	A-L	6.4	4.7	6.0	6.6	7.4	8.0
23	6	D	18.9	I-L	3.1	3.4	3.1	1.0	3.7	4.7
24	9	C	18.1	I-W	4.3	4.2	6.6	4.7	-	9.9
25	9	E	19.7	adv-X	8.6	-	10.2	10.6	-	8.2
26	-	-	18.4	I-L	4.9	4.5	5.0	3.7	4.2	5.0
27	7	C	19.2	A-L	5.8	3.7	8.3	10.9	8.5	11.1
28	7	C	17.9	I-L	4.1	3.2	4.2	4.3	3.9	6.9
29	9	A	17.10	adv-X	-	7.0	11.7	10.2	-	12.9
30	9	B	17.10	adv-X	6.6	-	9.9	6.8	-	11.7
31	6	C	17.11	I-L	2.4	2.8	3.2	-1.0	3.3	5.2
32	8	D	17.10	adv-L	4.4	4.4	7.8	6.0	7.4	8.7
33	9	B	17.3	I-N	4.4	4.0	7.3	8.7	7.6	8.7

TABLE A-7, continued

BACKGROUND
INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	6a	6b	7a	7b	7c	7d	7e	7f	7g	7h
34	6	C	17.5	I-L	3.4	3.7	3.8	3.1	4.8	5.0
35	6	C	16.10	I-L	4.1	3.9	5.0	6.1	4.2	5.5
36	5	inc.	17.9	I-L	3.2	3.6	3.0	0	4.4	5.9
37	5	C	17.6	I-L	3.8	3.7	5.2	1.0	4.0	5.5
38	9	B	17.6	adv-L	5.2	4.9	9.3	7.3	8.1	10.4
39	9	B	17.8	adv-L	6.2	5.3	8.0	7.9	8.7	10.4
40	6	B	16.9	int-L	3.7	4.9	5.3	6.2	-	6.0
41			18.3	I-L	3.9	3.9	5.9	7.8	4.6	5.7
42	7	B	17.11	I-L	4.5	4.3	5.4	4.3	5.8	5.7
43	6	B	18.8	I-L	4.7	3.2	4.7	4.3	5.6	6.9
44	6	B	16.9	int-IL	2.8	3.2	4.4	3.1	-	5.9
45	5	E	16.2	EK	2.8	3.0	-	-	-	4.0
46	9	C	18.4	AW	5.6	-	7.6	5.4	-	6.4
47	8	D	17.1	I-L	3.9	3.7	5.2	3.4	-	5.0
48	8	D	17.6	I-L	3.8	4.1	5.6	6.0	5.1	5.7
49	7	D	17.2	int-IW	3.4	3.2	4.9	3.2	-	5.0
50	7	C	16.10	int-IW	3.1	3.3	4.6	3.1	-	7.1
51	7	E	17.1	int-IW	2.1	2.6	2.5	2.3	-	4.8
52	6	D	16.6	int-IW	3.8	3.7	5.2	2.9	-	5.8
53	8	C	17.1	I-L	3.8	3.1	4.2	4.4	-	6.8
54	5	B	17.0	I-L	3.1	3.2	3.8	2.5	4.7	6.1
55	5	inc.	16.1	int-IW	2.7	3.2	4.0	2.6	-	6.7
56	8	D	17.1	I-L	3.2	3.8	4.8	3.4	4.7	5.9
57	8	B	17.2	I-L	5.5	3.8	6.3	5.6	-	8.0
58	9	B	17.6	A-X	5.8	-	7.0	6.6	-	12.3
59	8	B	16.1	I-N	5.9	5.5	10.8	8.3	7.6	9.0
60	5	C	17.10	I-W	4.0	3.0	4.2	2.4	-	4.1
61	6	C	16.6	I-L	3.9	3.8	5.6	5.8	4.9	6.4
62	8	C	16.3	I-L	4.9	3.9	5.6	5.6	-	7.1
63	5	B	15.7	I-L	4.2	3.9	4.2	1.7	4.3	5.5
64	5	C	15.3	E-L	2.4	2.9	-	-1.0	4.4	5.5
65	5	D	15.3	E-L	2.7	3.3	-	-1.0	4.4	5.3
66	6	C	15.10	I-L	2.7	2.8	3.3	1.3	3.9	3.5

TABLE A-7, continued

BACKGROUND INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	6a	6b	7a	7b	7c	7d	7e	7f	7g	7h
67	6	C	16.5	I-L	4.9	4.2	6.8	4.5	4.8	5.5
68	8	B	15.10	I-N	5.2	3.6	7.8	7.0	6.3	8.5
69	6	inc.	16.0	I-L	2.3	2.4	4.9	1.0	3.7	3.8
70	6	C	15.10	int-L	2.3	3.3	3.8	1.0	4.4	5.6
71	6	E	14.11	int-IW	2.4	2.6	3.8	2.6	-	3.5
72	5	D	15.7	I-L	2.9	3.4	4.4	1.0	4.0	4.0
73	5	B	15.4	P-L	3.4	4.0	3.8	2.8	3.8	3.8
74	5-6	C	16.4	P-L	3.8	3.4	5.6	5.4	6.2	6.1
75	6	C	13.7	int-IW	2.5	3.3	5.4	4.1	-	6.7
76	3	E	15.2	E-K	2.4	2.7	-	-	2.5	2.6
77	8	B	15.11	I-N	4.9	4.4	7.1	5.1	7.8	9.0
78	5	C	16.3	I-L	4.5	4.0	5.3	4.0	3.2	3.9
79	6	C	16.0	I-L	3.6	3.7	3.3	1.0	3.8	4.0
80	6	B	15.8	Prim.II-L	4.7	4.7	5.5	4.0	4.4	4.7
81	5-6	D	15.6	int-IW	2.9	3.3	3.8	2.2	-	4.6
82	5	E	16.7	E-N	2.9	1.5	-	-	1.3	4.4
83	6	B	15.11	I-L	2.9	3.8	5.2	3.7	4.5	5.6
84	6	C	15.10	I-L	2.4	2.6	3.3	1.0	3.7	4.0
85	3	E	15.2	E-K	2.8	2.1	-	-	2.2	2.7
86	6-8	C	15.3	int-IW	4.3	3.7	6.6	4.6	-	6.1
87	6	C	16.2	I-L	3.8	3.4	4.4	1.8	3.7	5.0
88	6	D	16.2	I-L	3.1	3.9	5.8	-1.0	3.9	5.2
89	6	E	16.0	I-L	2.9	3.7	3.3	1.0	3.7	2.3
90	6	C	16.7	I-L	3.4	2.9	5.0	1.9	5.1	6.3
91	5	C	15.6	I-N	3.4	4.3	5.3	2.2	3.7	5.2
92	8	C	15.11	I-N	6.1	5.2	8.8	8.0	8.1	8.1
93	8	B	15.8	int-IW	3.8	4.7	7.2	5.4	6.8	9.0
94	5	inc.	13.9		2.8	3.6	5.2	3.6		5.8
95	5	B	12.6	int-IW	4.2	4.9	7.6	4.3		5.7

TABLE A-7, continued

BACKGROUND INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	7i	7j	7k	7l	7m	7n
1	7.6	7.7	-	10.7	10.8	9.5
2	4.8	3.2	3.2	-	-	4.3
3	6.0	5.4	-	8.8	8.5	7.6
4	4.4	3.1	3.5	-	-	3.5
5	6.3	6.0	-	6.4	7.9	6.4
6	4.1	3.9	3.8	-	-	3.2
7	4.8	3.3	3.6	-	-	3.8
8	6.6	9.2	-	7.6	9.8	7.6
9	4.5	3.0	3.5	-	-	3.5
10	5.6	5.2	6.2	-	-	5.2
11	10.1	6.9	8.1	-	-	7.6
12	6.6	4.6	-	11.1	8.2	7.4
13	5.7	4.3	4.6	-	-	4.6
14	5.3	4.7	-	3.6	5.4	4.7
15	8.0	6.9	-	9.6	11.3	8.3
16	6.4	6.4	9.8	-	-	7.3
17	4.3	3.3	3.4	-	-	3.8
18	4.5	3.6	4.6	-	-	4.5
19	4.5	3.8	3.8	3.9	-	3.9
20	5.5	7.2	6.1	-	-	7.7
21	4.7	4.4	5.1	-	-	4.2
22	6.0	9.8	6.5	-	-	6.6
23	4.5	3.2	3.6	-	-	3.4
24	5.0	3.8	-	5.6	5.6	5.0
25	7.4	7.2	-	9.8	8.8	8.7
26	4.7	4.3	3.9	4.5	-	4.5
27	7.1	7.2	7.2	-	-	7.2
28	4.9	4.3	5.1	-	-	4.3
29	10.2	9.8	-	12.1	11.4	10.8
30	5.2	5.2	-	5.9	9.6	8.2
31	4.8	3.8	4.0	-	-	3.3
32	5.2	5.0	4.9	-	-	5.2
33	5.4	4.4	6.6	-	-	6.6

TABLE A-7, continued

BACKGROUND INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	7i	7j	7k	7l	7m	7n
34	4.8	3.1	5.1	-	-	3.8
35	4.6	3.8	3.9	-	-	4.2
36	3.9	3.0	3.5	-	-	3.5
37	4.4	2.8	4.5	-	-	4.0
38	7.7	4.6	6.1	-	-	7.3
39	6.7	5.5	7.2	-	-	7.2
40	5.5	3.7	4.7	4.2	-	4.9
41	4.6	2.9	4.5	-	-	4.6
42	5.7	4.8	4.9	-	-	4.9
43	5.1	2.8	4.2	-	-	4.7
44	3.8	3.2	2.6	2.7	3.6	3.2
45	-	-	2.4	3.3	-	3.1
46	5.0	6.2	-	8.2	7.2	6.8
47	5.1	4.8	4.7	4.7	-	4.7
48	6.4	3.8	4.0	-	-	5.1
49	4.2	3.6	2.3	2.3	3.9	3.5
50	5.0	3.6	2.8	2.7	4.6	3.5
51	4.0	4.2	2.0	2.5	3.9	2.6
52	4.1	3.6	2.2	4.6	4.3	4.0
53	4.8	3.5	4.5	4.9	-	4.4
54	4.4	2.6	3.9	-	-	3.8
55	4.3	3.0	1.8	2.5	3.9	3.1
56	4.8	4.5	4.0	-	4.6	4.5
57	5.7	4.4	5.5	6.7	-	5.6
58	5.4	5.6	-	9.9	8.2	6.8
59	8.9	6.6	8.5	-	-	8.3
60	3.7	3.2	2.2	3.0	3.0	3.1
61	4.9	4.1	4.5	-	-	4.9
62	4.8	4.3	6.0	4.9	-	4.9
63	4.3	2.9	4.2	-	-	4.2
64	-	-	-	-	-	2.9
65	-	-	-	-	-	5.3
66	4.3	2.9	3.4	-	-	3.3

TABLE A-7, continued

BACKGROUND
INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	7i	7j	7k	7l	7m	7n
67	5.7	5.4	3.9	-	-	4.9
68	5.4	4.1	6.0	-	-	6.3
69	4.0	2.9	3.4	-	-	3.4
70	3.9	2.8	4.8	-	-	3.8
71	3.4	3.6	2.0	2.1	3.2	2.6
72	4.4	3.3	3.5	-	-	3.5
73	4.6	2.9	3.4	-	-	3.8
74	4.4	3.5	3.1	-	-	4.4
75	4.6	3.7	2.2	3.0	4.9	3.9
76	-	-	-	-	-	2.6
77	7.1	5.6	8.5	-	-	7.1
78	4.8	3.0	3.6	-	-	4.0
79	4.3	3.2	3.6	-	-	3.6
80	5.0	2.2	2.8	-	-	4.7
81	4.1	3.7	1.8	4.6	3.2	3.3
82	-	-	-	-	-	4.2
83	5.3	3.7	4.4	-	-	4.4
84	4.5	3.1	4.7	-	-	3.3
85	-	-	-	-	-	2.7
86	6.0	4.7	4.0	3.6	4.9	4.7
87	4.1	3.0	3.3	-	-	3.7
88	5.0	3.1	3.9	-	-	3.9
89	4.2	2.8	4.6	-	-	3.3
90	4.4	3.3	4.0	-	-	4.0
91	4.1	2.9	3.5	-	-	3.7
92	7.3	6.6	6.9	-	-	7.3
93	6.0	4.2	8.1	-	-	6.0
94	5.0	4.9	2.4	3.6	4.6	4.4
95	6.7	5.9	2.1	5.4	5.8	5.6

TABLE A-8

INDEX FOR TABLES A-9 and A-10

1. California Survey of Work Speed and Accuracy
    - a. Number Checking
    - b. Finger Dexterity
    - c. Counting
    - d. Code Translation

2. MacQuarrie Test for Mechanical Ability - Total
    - a. Tracing
    - b. Typing
    - c. Dotting
    - d. Copying
    - e. Location
    - f. Pursuit

3. Primary Mental Abilities
    - a. Verbal - Words
    - b. Verbal - Pictures
    - c. Verbal
    - d. Spatial
    - e. Word Grouping
    - f. Figure Grouping
    - g. Reasoning
    - h. Perception
    - i. Numbers

4. Chicago Non-Verbal Examination - Total
    - a. Test 1
    - b. " 2
    - c. " 3
    - d. " 4
    - e. " 5
    - f. " 6
    - g. " 7
    - h. " 8
    - i. " 9
    - j. " 10

5. SRA - Non-Verbal Test

6. Minnesota Paper Form Board
    - a. Form AA
    - b. Form BB

7. Wide Range Arithmetic Test

TABLE A-9

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	1a	1b	1c	1d	2a	2b	2c	2d	2e	2f
1	142	143	1054	48	41	40	33	62	37	36
2	95	63	574	17	35	14	16	8	3	12
3	94	111	488	29	30	47	31	35	34	24
4	50	52	152	9	11	23	9	26	15	10
5	87	69	544	26	24	39	23	39	34	27
6	45	52	524	9	30	27	18	9	9	8
7	19	77	602	29	28	33	16	38	29	23
8	123	180	702	50	32	50	31	72	39	24
9	20	31	-52	9	8	13	8	2	6	1
10	72	110	888	26	22	30	33	20	25	21
11	98	78	326	0	29	0	0	19	19	6
12	98	110	814	47	32	36	22	31	40	24
13	91	84	680	36	39	42	22	43	29	13
14	93	69	800	33	49	50	25	38	17	30
15	90	120	598	38	26	44	24	46	35	25
16	105	179	1054	38	47	52	31	60	37	40
17	103	107	512	22	29	14	16	2	12	22
18	95	59	400	33	18	29	18	23	15	27
19	109	151	608	27	37	29	18	15	25	17
20	102	133	-480	37	33	40	27	35	27	20
21	82	133	1092	10	35	40	21	42	13	18
22	104	139	620	32	26	43	29	21	16	13
23	58	48	-414	1	11	0	0	7	8	14
24	118	90	608	47	37	35	31	40	37	28
25	65	72	388	25	26	29	23	8	22	18
26	91	44	468	32	60	18	16	20	5	20
27	129	99	-956	18	57	40	19	40	35	22
28	79	117	828	29	33	38	27	38	40	10
29	107	148	1238	44	48	47	31	47	38	29
30	118	87	804	57	52	27	20	51	37	25
31	62	76	818	22	31	31	20	24	25	5
32	130	83	576	35	51	42	22	47	32	32
33	94	124	1064	15	27	60	27	35	36	18

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	1a	1b	1c	1d	2a	2b	2c	2d	2e	2f
34	98	75	558	22	25	39	15	21	29	20
35	62	69	-624	10	32	38	25	5	6	16
36	61	104	638	25	17	11	17	30	21	13
37	42	61	448	11	14	16	14	7	2	5
38	111	113	684	37						
39	126	123	-246	39	14	40	24	21	12	21
40	72	75	4	30	36	31	21	52	17	19
41	112	109	424	31	53	34	17	31	16	19
42	81	84	528	23	16	23	25	21	8	12
43	61	76	644	21	20	30	18	26	33	9
44	122	31	772	28	30	30	27	13	26	16
45	34	57	370	4	26	13	23	61	19	12
46	92	104	662	34	18	36	19	26	37	21
47	48	60	824	12	26	20	23	26	26	15
48	71	87	304	16	29	51	16	21	20	19
49	56	53	186	9	23	35	16	18	9	6
50	94	129	1030	40	49	39	26	57	30	22
51	74	71	650	29	25	33	20	33	16	20
52	80	89	316	29	27	43	19	41	30	14
53	97	0	1010	7	43	43	33	49	16	30
54	135	37	480	35	20	13	21	43	38	9
55	95	72	440	28	22	26	15	21	25	11
56	126	122		27	45	56	10	53	22	6
57	87	100	560	37	31	34	29	28	30	18
58	106	138	808	30	34	40	22	49	27	30
59	102	99	840	34	43	40	16	28	39	25
60	73	56	400	3	14	32	18	35	23	6
61	61	89	934	19	38	43	27	58	27	25
62	78	83	600	24	43	30	18	14	15	7
63	74	77	586	23	25	23	28	37	38	11
64	64	60	368	22	11	22	14	10	15	6
65	72	80	510	18	27	36	20	19	22	10
66	101	88	698	23	43	30	25	37	22	24

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	1a	1b	1c	1d	2a	2b	2c	2d	2e	2f
67	59	86	616	18	30	43	28	30	20	16
68	82	72	806	29	25	35	15	37	27	21
69	66	108	472	4	25	23	26	10	7	10
70	92	106	984	30	20	23	18	68	22	19
71	86	86	820	15	28	23	31	68	26	11
72	86	123	620	17	55	23	27	56	31	22
73	94	0	638	24	32	23	31	43	33	14
74	109	77	452	24	37	17	19	48	39	17
75	59	74	556	24	35	33	19	25	7	16
76	42	70	380	15	9	4	14	16	16	13
77	109	95	918	33	29	45	18	63	40	14
78	34	-36	-188	10	6	21	13	1	1	5
79	71	7	520	17	15	15	14	19	37	7
80	41	29	470	11						
81	71	96	746	26	13	22	12	9	22	4
82	2	52	508	16	48	30	26	25	18	14
83	76	117	732	24	22	35	17	26	21	16
84	96	109	724	21	49	23	31	59	36	38
85	42	66	284	9	36	19	14	4	2	9
86	88	126	740	27	23	45	20	44	33	26
87	64	85	548	8	30	23	23	13	5	11
88	97	110	986	40	29	35	17	44	27	13
89	48	59	512	15	22	20	31	11	6	11
90	80	79	-96	16	18	27	11	25	32	19
91	60	73	630	28						
92	100	120	1026	32	31	41	18	52	40	27
93	96	137	736	33	48	34	20	49	39	22
94	98	98	644	29	29	26	21	18	31	22
95	76	90	730	24	26	32	21	40	11	10

TABLE A-1, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	3a	3b	3c	3d	3e	3f	3g	3h	3i
1	23	24	47	27	24	21	45	50	50
2	13	7	20	18	11	14	25		25
3	22	26	48	16	22	21	43	28	52
4	10	9	19	17	10	21	31	26	17
5	28	20	48	24	24	23	47	47	51
6	6	13	19	2	4	7	11	22	19
7	2	4	6	19	15	20	35	33	37
8	26	17	43	25	23	23	46	32	49
9	19	15	34	17	16	14	30	6	10
10	7	12	19	26	14	22	36	47	41
11	24	26	50	23	23	19	42	22	49
12	30	19	49	25	24	24	48	28	52
13	20	21	41	20	22	4	26	26	39
14	26	15	41	25	18	19	37	31	40
15	26	26	52	20	22	21	43	29	45
16	22	24	46	24	20	22	42	48	52
17	6	8	14	13	13	2	15	21	18
18	12	7	19	18	11	13	24	33	49
19	7	13	20	17	13	17	30	35	50
20	14	14	28	21	21	21	42	41	51
21	10	14	24	20	20	10	30	22	49
22	29	25	54	20	21	21	42	39	52
23	10	9	19	12	13	11	24	12	29
24	24	11	35	26	20	20	40	48	52
25	33	33	66	21	26	21	47	23	52
26	13	12	25	15	17	16	33	5	51
27	24	19	43	24	19	19	38	42	50
28	16	16	32	25	14	23	37	44	45
29	30	29	59	26	27	25	52	47	51
30	23	19	42	27	24	20	44	40	49
31	14	5	19	18	13	14	27	36	38
32	29	29	58	23	20	17	37	27	52
33	26	14	40	27	22	25	47	48	52

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	3a	3b	3c	3d	3e	3f	3g	3h	3i
34	9	9	18	8	14	21	35	29	34
35	15	7	22	20	13	15	28	42	40
36	11	6	17	23	10	19	29	28	42
37	11	15	26	16	13	7	20	20	41
38	23	19	42	25	21	16	37	48	49
39	18	23	41	20	20	24	44	44	50
40	11	15	26	17	15	20	35	34	52
41	9	12	21	15	15	19	34	38	39
42	16	14	30	21	21	19	40	19	44
43	12	9	21	22	15	18	33	40	43
44	7	13	20	18	13	21	34	34	52
45	13	8	21	22	9	11	20	25	32
46	19	21	40	23	21	19	40	38	49
47	16	14	30	19	22	16	38	34	38
48	16	15	31	16	17	15	32	22	51
49	18	5	23	7	16	12	28	10	33
50	14	9	23	24	19	22	41	40	52
51	16	16	32	20	19	20	39	35	45
52	17	9	26	17	16	22	38	31	51
53	21	11	32	21	21	19	40	27	49
54	12	13	25	16	17	19	26	27	50
55	7	6	13	22	7	21	28	20	31
56	16	10	26	21	20	23	43	43	50
57	15	14	29	23	18	27	45	39	44
58	28	14	42	25	21	26	47	46	50
59	33	31	64	25	27	26	53	39	51
60	8	9	17	26	12	12	24	36	34
61	10	16	26	20	12	25	37	26	50
62	11	11	22	23	15	20	35	48	51
63	13	5	18	23	18	21	39	40	51
64	16	14	30	16	15	18	33	26	44
65	14	11	25	18	16	4	20	30	47
66	9	7	16	25	14	23	37	38	40

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	3a	3b	3c	3d	3e	3f	3g	3h	3i
67	15	8	23	21	15	17	32	34	20
68	24	18	42	22	20	24	44	34	51
69	4	10	14	17	5	6	11	1	43
70	5	6	11	21	16	22	38	34	40
71	6	13	19	19	9	18	27	36	38
72	10	10	20	20	19	23	42	41	41
73	8	9	17	19	17	18	35	27	46
74	16	13	29	25	16	14	30	28	46
75	16	15	31	18	22	22	44	38	34
76	8	6	14	16	10	16	26	0	7
77	24	17	41	25	22	26	48	48	31
78	19	11	30	5	7	7	14	9	29
79	8	10	18	21	7	18	25	18	37
80									
81	16	11	27	19	7	5	12	28	42
82	7	6	13	22	5	9	14	25	28
83	14	23	37	19	14	20	34	26	44
84	8	11	19	23	14	23	37	50	52
85	2	2	4	7	4	7	11	10	30
86		21		20	16	16	32	37	47
87	18	16	34	15	16	15	31	7	38
88	14	9	23	20	11	7	18	47	34
89	14	11	25	18	13	12	25	10	14
90	9	7	16	23	16	21	37	26	36
91	13	8	21	17	11	21	32	12	48
92	26	26	52	24	24	24	48	38	38
93	25	26	51	24	17	26	43	29	51
94	20	17	37	20	14	16	30	33	48
95	30	30	60	22	21	17	38	34	52

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	4a	4b	4c	4d	4e	4f	4g	4h	4i	4j
1	11	18	9	22	11	24	22	22	9	33
2	7	8	2	8	9	2	10	6	6	27
3	10	20	7	12	9	8	24	20	7	31
4	5	20	7	14	9	10	10	20	7	13
5	11	20	6	14	7	20	18	22	10	33
6	5	14	6	8	10	6	12	7	6	11
7	9	18	7	14	10	12	16	19	10	24
8	10	22	10	20	12	4	16	22	10	31
9	3	10	5	8	8	8	16	11	7	11
10	11	22	8	12	11	18	22	18	9	33
11	7	18	8	14	9	6	18	17	8	26
12	11	22	11	24	12	18	20	20	9	33
13	10	14	8	16	10	22	18	21	10	25
14	8	24	8	16	8	20	18	18	7	27
15	11	20	9	14	10	18	22	19	10	33
16	10	20	10	14	12	20	22	19	9	33
17	8	10	8	8	8	10	8	15	5	24
18	11	20	3	14	9	2	18	20	10	28
19	11	16	5	4	12	6	18	19	9	33
20	10	16	5	14	9	8	22	18	9	31
21	11	18	9	10	9	12	16	17	10	33
22	8	18	6	8	11	12	14	23	10	30
23	5	10	6	10	9	10	14	11	6	17
24	10	14	5	16	11	8	22	18	9	33
25	11	14	9	14	8	6	10	19	8	18
26	10	18	6	10	10	4	18	17	7	32
27	8	6	9	22	11	20	18	23	10	33
28	11	24	6	12	11	22	20	18	9	32
29	11	16	11	16	11	24	22	24	10	32
30	8	18	9	14	11	22	22	21	9	32
31	11	18	7	14	11	18	22	20	10	16
32	10	20	6	14	11	14	20	19	10	33
33	10	18	10	16	11	22	16	22	9	25

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	4a	4b	4c	4d	4e	4f	4g	4h	4i	4j
34	8	16	8	10	12	12	30	30	9	33
35	9	16	6	18	8	10	12	15	9	27
36	7	14	7	10	10	10	16	12	4	19
37	8	8	1	10	9	10	8	10	9	11
38	11	12	9	10	11	20	18	21	9	30
39	11	20	6	16	11	14	22	22	10	33
40	8	12	5	15	9	16	18	19	10	33
41	11	20	6	12	11	10	24	20	10	30
42	10	18	5	12	12	12	20	18	10	29
43	11	20	7	12	12	16	14	21	9	33
44	11	16	5	8	12	4	18	18	9	[illegible]
45	4	10	6	14	10	8	10	16	6	17
46	11	24	8	10	11	4	14	20	9	32
47	7	20	8	16	8	22	18	19	9	22
48	10	14	8	14	12	6	14	14	9	18
49	10	12	1	8	8	8	12	3	5	21
50	11	18	9	10	11	6	16	14	7	33
51	8	18	3	14	9	4	12	16	8	25
52	9	16	5	14	9	10	20	21	10	32
53	11	18	10	12	11	8	16	21	9	33
54	11	14	8	8	11	12	20	20	8	33
55	6	16	5	8	8	4	12	16	8	24
56	11	18	9	10	11	0	22	20	9	33
57	9	18	8	16	10	24	14	21	10	33
58	9	20	3	18	12	24	22	23	10	33
59	10	18	11	10	11	24	22	23	10	33
60	10	16	5	14	10	10	18	21	9	27
61	8	18	6	10	11	18	12	18	10	9
62	11	18	6	10	10	8	18	19	10	31
63	7	18	4	10	10	18	20	9	7	22

TABLE A-9, continued

TEST INFORMATION ON A DEAF-SCHOOL SAMPLE

Subject Number	4a	4b	4c	4d	4e	4f	4g	4h	4i	4j
64	7	10	3	6	10	10	20	15	8	30
65	6	12	6	12	12	6	22	18	8	32
66	6	12	6	6	8	4	14	13	9	33
67	7	12	6	18	10	20	18	19	9	27
68	7	20	7	20	11	22	22	20	9	29
69	8	6	4	8	9	10	12	9	8	30
70	11	22	9	18	11	10	20	20	8	25
71	8	18	7	14	10	16	14	19	10	21
72	9	20	6	16	12	20	20	19	10	33
73	7	20	9	12	12	14	20	16	10	23
74	11	24	8	14	11	12	20	19	9	32
75	7	18	9	12	11	14	12	7	10	27
76	6	18	1	4	9	10	10	14	8	19
77	11	22	8	18	10	24	24	24	10	33
78	3	6	0	6	5	5	8	13	6	12
79	7	10	6	6	10	6	10	12	6	30
80	6	10	6	8	9	6	16	1	6	16
81	6	22	5	8	9	6	8	18	7	22
82	4	14	6	6	9	6	14	11	6	19
83	7	18	5	12	11	10	18	17	8	26
84	11	22	8	18	11	22	22	19	9	33
85	5	6	0	6	6	10	8	9	8	18
86	8	18	6	14	10	4	16	13	5	24
87	8	10	4	10	9	10	10	10	7	23
88	9	16	5	16	10	4	16	5	9	33
89	7	18	1	16	9	6	12	16	7	23
90	8	18	9	12	8	4	14	19	8	28
91	6	10	4	10	8	6	12	17	8	30
92	10	20	11	16	11	12	22	23	10	33
93	10	22	11	18	12	24	22	21	10	33
94	7	20	7	8	8	8	16	11	9	27
95	8	12	5	10	11	10	14	18	10	27

TABLE A-9, continued

TEST INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	5	6a	6b	7
01	54	50	56	58
02	11	22	27	21
03	44	33	28	50
04	23	35	28	17
05	47	49	50	37
06	31	23	36	14
07	42	30	37	26
08	52	57	41	46
09	32	5	16	16
10	47	51	58	30
11	43	45	46	23
12	50	48	57	58
13	38	44	37	26
14	50	44	44	44
15	47	36	37	45
16	39	59	53	--
17	37	23	28	16
18	38	20	42	24
19	41	41	45	28
20	41	33	44	42
21	43	35	35	30
22	45	24	30	31
23	30	8	23	14
24	48	44	50	35
25	42	27	27	45
26	31	10	11	26
27	44	46	57	55
28	47	36	40	29
29	50	49	50	63
30	54	58	51	53
31	44	42	39	25
32	43	40	44	37
33	41	41	41	47

TABLE A-9, continued

TEST INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	5	6a	6b	7
34	43	38	36	21
35	39	27	18	25
36	43	32	38	21
37	12	20	24	23
38	38	41	48	48
39	50	45	42	54
40	39	35	47	23
41	42	34	50	26
42	36	35	21	24
43	38	41	48	35
44	40	14	21	36
45	29	38	36	17
46	47	27	22	28
47	42	23	27	22
48	43	36	37	26
49	28	4	1	17
50	45	41	40	33
51	46	21	27	14
52	35	21	28	28
53	44	53	57	30
54	44	29	33	35
55	27	22	28	21
56	44	23	38	28
57	46	57	45	46
58	52	57	56	53
59	48	53	45	51
60	38	34	35	14
61	50	48	21	24
62	41	25	38	37
63	39	33	44	26

TABLE A-9, continued

TEST INFORMATION ON A DEAF SCHOOL SAMPLE

Subject Number	5	6a	6b	7
64	33	22	11	23
65	38	31	41	25
66	12	53	51	19
67	51	33	49	20
68	45	40	26	47
69	20	20	31	20
70	49	56	52	26
71	37	25	32	17
72	48	24	36	20
73	46	29	22	19
74	50	46	57	31
75	43	43	40	26
76	27	5	9	8
77	48	58	59	40
78	32	3	8	20
79	32	20	36	20
80	21	17	20	--
81	35	42	36	27
82	35	33	34	14
83	36	37	54	29
84	47	40	54	19
85	36	1	8	9
86	43	51	57	29
87	40	21	28	26
88	34	29	39	28
89	38	21	12	9
90	32	39	42	27
91	36	27	4	25
92	49	51	52	43
93	47	52	45	51
94	38	43	23	26
95	38	33	34	33

TABLE A-10

MEANS AND STANDARD DEVIATIONS FOR VARIOUS TESTS ADMINISTERED TO A DEAF SCHOOL POPULATION

	1a	1b	1c	1d	2	2a	2b	2c	2d	2e	2f
Mean	82.8	1453	24.4	86.2	51.9	30.3	31.0	21.0	31.3	23.7	17.7
S.D.	27.4	363	11.5	36.8	5.4	12.0	11.7	6.8	17.7	11.3	8.3

	3a	3b	3c	3d	3e	3f	3g	3h	3i
Mean	16.0	14.1	30.1	20.0	18.0	16.4	34.2	31.1	42.4
S.D.	7.5	7.8	13.8	4.8	5.8	5.1	9.7	11.7	10.4

	4	4a	4b	4c	4d	4e	4f	4g	4h	4i	4j
Mean	134.7	8.6	16.5	6.5	12.4	10.0	11.9	16.8	17.1	3.5	26.7
S.D.	27.8	2.1	4.5	2.6	4.1	1.5	6.6	4.4	4.8	1.5	6.3

	5	6a	6b	7
Mean	39.7	29.7	34.3	36.5
S.D.	9.0	12.8	13.7	13.8

TABLE A-11

INTERCORRELATIONS OF SUBTESTS OF STANFORD ACHIEVEMENT TEST FOR A DEAF-SCHOOL SAMPLE AND FOR A COMPARISON GROUP*

	Sp	L	AC	SS	S
Paragraph Meaning	.82 (.70,.60)	.75 (.80,.78)	.70 (.61,.68)	.79 (.81,.84)	.75 (.80,.77)
Spelling		.80 (.76,.70)	.80 (.59,.58)	.79 (.58,.55)	.68 (.53,.38)
Language			.78 (.68,.74)	.76 (.77,.77)	.75 (.70,.65)
Arithmetic Computation				.66 (.59,.68)	.67 (.52,.55)
Social Studies					.84 (.80,.80)

N = 58 - 60 for Deaf School Sample

* Numbers in the parentheses are correlations for comparison groups of 1000 pupils each, who took the Stanford Test as part of the Spring, 1963, standardization. The numbers to the left within the parenthesis are for Grade 6 pupils on Intermediate II Battery; the numbers within the parenthesis to the right are for Grade 9 pupils on the Advanced Battery. (Unpublished results furnished by courtesy of Professor H. C. Rudman, College of Education, Michigan State University).

TABLE A-12

INTERCORRELATIONS AMONG THE SUBTESTS OF THE PRIMARY MENTAL ABILITIES TEST (ELEMENTARY FORM) FOR A DEAF-SCHOOL SAMPLE (N = 93)

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Words	.75	--	.51	.81	.44	.72	.28	--
(2) Pictures			.35	.74	.32	.61	.20	--
(3) Verbal			.46	.83	.42	.71	.25	.51
(4) Spatial				.52	.31	.62	.61	.50
(5) Word Groups					.47	--	.32	.62
(6) Figure Groups						.	.50	.46
(7) Reasoning							.52	.59
(8) Perception								.90
(9) Numbers								

TABLE A-13

INTERCORRELATIONS AMONG THE SUBTESTS CSWSA FOR A DEAF SCHOOL SAMPLE (N = 59)

	(2)	(3)	(4)
(1) Number Checking	.45	.15	.60
(2) Code Translation		.33	.73
(3) Finger Dexterity			.35
(4) Letter Counting			

TABLE 39

A COMPARISON OF VINELAND SOCIAL MATURITY SCALE SCORES WITH BENDER-VISUAL GESTALT TEST SCORES

	Vineland S-M Scale			Bender-Visual Gestalt Test		
Trainee	CA	Age Equiv.	Social Quotient	Score	Freq.	% Rank
1.	34.9	19.2	77			
2.	24.7	21.0	85	35	1	64
3.	21.6	19.3	85	16	1	23
4.	23.8	19.0	80			
5.	21.0	18.7	89			
6.	30.1	18.0	72	0	1	4
7.	20.3	10.8	53			
8.	17.4	9.3	53	59	1	100
9.	22.7	21.5	95	42	2	77
10.	19.4	19.7	101	30	2	59
11.	41.1	24.5	60			
12.	21.7	19.8	91	18	3	50
13.	48.8	24.0	96			
14.	21.1	18.0	89	14	1	36
15.	18.7	17.8	95			
16.	23.1	19.2	83			
17.	40.5	20.0	80			
18.	42.5	19.8	79			
19.	30.7	21.5	70	30	2	59
20.	37.9	18.3	73	10	1	14
21.	36.0	18.0	72	14	1	18
22.	17.1	15.8	90			
23.	26.2	13.5	54	10	1	27
24.	30.0	18.0	72	24	1	32
25.	23.6	18.3	77	50	2	91
26.	21.9	15.5	66	42	2	77
27.	32.1	19.2	77	50	2	91
28.	30.7	18.2	74	55	1	95
29.	18.2	14.7	81	43	1	82
30.	21.11	14.7	70	41	1	68
31.	21.11	18.3	86	28	3	50
32.	19.8	14.1	71	2	1	9
33.	23.1	15.5	67	28	3	50
Sum X			2563			
Sum X^2			203991			
$\bar{X}$	29.3		77.67			
S D			12			

TABLE A-14

F and Group Means for Tests Which Showed A Significant Effect Due to Age in the Deaf School Population

Test	F	Significance Level	Age Groups		
			1*	2	3+
Wide Range	3.64	(.05)	32.96	31.909	25.125
PMA-Words	3.79	(.05)	18.00	16.64	12.97
PMA-Pictures	3.17	(.05)	16.41	13.97	12.03
PMA-Verbal	8.38	(.01)	35.73	30.54	24.77
PMA-Word Grouping	5.84	(.01)	18.00	17.33	13.84
Chicago Non-Verbal Subtest #1	7.22	(.01)	8.96	9.48	7.64
CSWSA Number Checking	6.23	(.01)	9178	88.12	72.73

* Oldest group

+ Youngest group

APPENDIX B

B-1

JOB ADJUSTMENT TRAINING

Trainee: ____________ Case # ___ Age at admittance: ___ IQ: ___
Admittance Date: ________
Educational Attainment: ________ School ____________
Job Experiences : ____________________
____

Handicaps in addition to deafness: ____________
____

CRITERIA	EVALUATION	DATE COMPLETED
1. Personal Information Sheet		
2. Personal Evaluation Sheets (2)		
3. Attendance at lectures stressing the implications of deafness in job situations		
4. Short Form Job Application Blank		
5. Long Form Job Application Blank		
6. MESC Registration Form		
7. Making appropriate written responses in mock employment application situations. . .		
8. Socio-drama experience in an employment threshold situations. . .		
9. Interview with a MESC Placement Consultant for the Deaf		
10. Filling out DVR Survey Sheet		
11. Attendance at lectures on DVR services . . .		
12. Attandance at lectures on State Civil Service jobs.		
13. Filling out State Civil Service Request Forms for notification of examinations.		
14. Filling out applications for State Civil Service jobs. . .		
15. Taking State Civil Service examinations. . .		
16. Reality experience in job application. . . . (accompanied by counselor).		
17. Reality experience in job application. . . . (unaccompanied)		
18. Work experience.		
19. Work experience.		
20. Work experience.		
21. Final placement.		

B-2

JANITORIAL WORK

CASE # ____

NAME: ______________________ AGE: ____ DATE: __________

DETAILS

1. Dusting ______________
2. Dry Mopping ______________
3. Sweeping Floors ______________
4. Cleaning Rest Rooms ______________
    - a. toilet ____
    - b. lavatory ____
    - c. refill towel racks ____
    - d. floors ____
5. Wet Mopping Floors ______________
6. Burning Papers ______________
7. Collecting Trash or Waste ______________
8. Cleaning Windows ______________
9. Cleaning Stairways ______________
10. Other Details not Listed ______________

1. Excellent
2. Good
3. Fair
4. Poor
5. Fail

OBSERVATION OF WORK ABILITIES

Degree of Skill . . . . ______________

Selection of Equipment. . . . . ______________

Extent of Instruction Needed. . . . . ______________

Speed in doing the work . . . . ______________

Extent of Caring for Equipment. . . . . ______________

Degree of Accomplishment. . . . . ______________

Degree of Safety . . . . ______________

General Attitude Toward this Work . . . . ______________

His ability to carry out verbal or written instructions ______________

His ability to solve problems without instructor help ______________

Dependability and punctuality in carrying out assignments ______________

Desire to learn . . . . ______________

Effort to use correct language . . . . ______________

Ability to accept directions and suggestions; change of approaches or assignments

____

METALWORKING

CASE # ____

NAME ______________________ AGE: ______ DATE: ______________

CONSTRUCTION OF A SHEET METAL BOX

1. Drawing Blue Prints ______________
2. Following Blue Prints ______________
3. Lay-Out (measuring) ______________
4. Cutting the metal ______________
5. Bending the metal ______________
6. Soldering the metal ______________
7. Finishing ______________

1. Excellent
2. Good
3. Fair
4. Poor
5. Fail

OBSERVATION OF WORK ABILITIES

Ability to read blue prints . . . . ______________

Ability to follow blue prints . . . . ______________

Ability to Lay-Out (measure accurately) ______________

Degree of Skill . . . . ______________

Selection of Tools or Equipment . . . . ______________

Speed in Making . . . . ______________

Extent of Instruction Needed . . . . ______________

Extent of Caring for tools and equipment . . . . ______________

Degree of Accomplishment . . . . ______________

Degree of Safety . . . . ______________

Quality of Work . . . . ______________

Attitude toward this Project . . . . ______________

His ability to carry out verbal or written instructions ______________

His ability to solve problems without instructor help ______________

Dependability and punctuality in carrying out assignment ______________

Desire to learn . . . . ______________

Effort to use correct language . . . . ______________

Ability to accept directions and suggestions; change in approaches or assignments

____

B-4

WOODWORKING

Case # ___

NAME: ______________________ AGE: ____ DATE: __________

CONSTRUCTION OF THE JOINTS BY:	HAND TOOLS	MACHINES
1. Butt Joint		
2. Rabbet Joint		
3. Dado Joint		
4. Stopped Dado Joint . . .		
5. Cross Lap Joint		

1 - Excellent
2 - Good
3 - Fair
4 - Poor
5 - Fail

OBSERVATION OF WORK ABILITIES

Ability to read blue prints . . . . ______________________

Ability to follow blue prints . . . . ______________________

Ability to layout (measure accurately) . . . . ______________________

Degree of Skill . . . . ______________________

Selection of Tools or Machines . . . . ______________________

Speed in Making the Joint . . . . ______________________

Extent of Instruction Needed . . . . ______________________

Extent of caring for Tools and Machines . . . . ______________________

Degree of Accomplishment . . . . ______________________

Degree of Safety . . . . ______________________

Quality of Work . . . . ______________________

General attitude toward this work . . . . ______________________

His ability to carry out verbal or written instructions ______________________

His ability to solve problems without instructor help ______________________

Dependability and punctuality in carrying out assignment ______________________

Desire to learn . . . . ______________________

Effort to use correct language . . . . ______________________

Ability to accept directions and suggestions;
changed approaches or assignments . . . . ______________________

ADDITIONAL COMMENTS:

B-5

DRAWING

CASE # ____

NAME: ______________________ AGE: _____ DATE ______________

DRAWING BLUE PRINTS

1. Excellent
2. Good
3. Fair
4. Poor
5. Fail

1. Butt Joint ______________
2. Rabbet Joint ______________
3. Dado Joint ______________
4. Stopped Dado Joint ______________
5. Cross Lap Joint ______________

OBSERVATION OF WORK ABILITIES

Ability to measure accurately . . . . ______________

Degree of Skill . . . . ______________

Selection of Drawing Equipment . . . . ______________

Extent of Instruction Needed . . . . ______________

Speed in Drawing the Blue Print . . . . ______________

Degree of Accomplishment. . . . . ______________

Quality of Work . . . . ______________

General Attitude toward this work. . . . . ______________

His ability to carry out verbal or written instructions ______________

His ability to solve problems without instructor help ______________

Dependability and punctuality in carrying out assignment ______________

Desire to learn . . . . ______________

Effort to use correct language . . . . ______________

Ability to accept directions and suggestions; change in approach or assignments ____ ______________

ADDITIONAL COMMENTS:

APPENDIX C

CASE SUMMARY AND DISCUSSION OF SOME OF THE TRAINEES RELEASED

Trainee #01

This was a severely hard-of-hearing 33-year old man admitted to the program in September, 1962. He remained in training for 410 days.

Release was made on the basis of parental disapproval of the trainee's progress and objections to recommendations that psychiatric help be sought.

#01 had a history of severe emotional problems at the time he was admitted. A psychiatric evaluationssought several months prior to release indicated the presence of psychopathy (mental illness). He was unable to deal with even the simplest of daily living problems and was poorly equipped to handle personal anxiety. As a partial release he drank.

Five months after release #01 had not obtained any type of employment and was completely dependent upon his parents for support.

in 1965, he was readmitted to the Michigan Rehabilitation Institute in order to finish a printing course which he began several years earlier.

This trainee's work record, over a nine year period, included 30 known jobs from which he was "fired" or quit in a fit of anger. The general work complaint pattern was:

1. Dissatisfaction with the work.
2. Poor work output and low quality.
3. Inability to follow instructions.
4. Unable to follow employment rules.
5. Tardiness and absenteeism.
6. Poor relations with employers and other employees.
7. Fighting.
8. Feeling that he was being discriminated against - in one instance this perhaps was true.

#ol had unrealistic employment goals brought about by some rather grandiose notions as to his abilities and special talents. At the end of training he had not succeeded in aligning work goals with his limited education, performance and work opportunities.

#01 did not adjust to the program nor benefit from personal counseling. In fact, at times, the trainee was incapable of learning in spite of the fact he had an adequate grasp of spoken, and written language as well as an ability to use Sign.

Although this man's emotional and personality problems were evident throughout his training, it was generally thought that what seemed to be abnormal was merely a reaction to his handicap problems which would dissipate with specific, intensive help and some personal (limited) success.

RMR:mf

Trainee #04

This 23 year, 8 month-old multiple-handicapped, severely deaf male was admitted to the program in September of 1962 and released after 393 days of training.

#04 was placed on a job in a local restaurant and night club as a kitchen helper. He remained on this job for over a year.

Periodic checks with this man revealed that he disliked his job because it was night work (5 p.m. to 4 a.m. - six days a week). Eventually a janitorial job was obtained for him.

The employer was very satisfied with #04's work and he made no mention of problems of the type encountered in various earlier employment situations prior to admission in the training program.

Since graduation from a school for the deaf in 1958, #04 held three different jobs from which he was fired. The mother, who took an extreme interest in her son's work, reported that she felt unfair advantage was taken of him because of his deafness. He rebelled against each job in turn and was difficult to handle in the home. He functioned as a dishwasher twice and once as a bookbinding trainee. His longest period of employment was six months as a dishwasher.

Adjustment to the Center program was extremely good. At the time of admission psychological testing indicated an average non-verbal intelligence with an achievement grade level of 4.3. At the time of release this grade achievement rose only slightly.

Although there was a horizontal qualitative improvement in this man's reading and communication skills he seemed to be functioning up to capacity. He appeared to be intellectually compartmentalized and rigid - he could not transfer his class room learning to more practical everyday problems.

Because this man's home was located in Lansing, Michigan, it was his parents wish that he be allowed to live at home. This notion was discouraged since he needed experience in independent living. The parents cooperated and #04 was moved into the YMCA a month after he entered the program. He remained in the "Y" without incident until he was released from the program.

This trainee had considerable difficulty interacting with the other trainees. Quite often his passivity provoked aggression with other men. His reaction to frustration was to cry. His immaturity seemed to keep him on the periphery of most social activities. Crying was a very real problem and could be provoked quite easily. This form of emotion subsided considerably by the end of training. He seemed to abandon this behavior because of ridicule from the other trainees rather than an increase in maturity.

Trainee #04 (Cont.)

There were indications in #04's developmental history that he could not function in aggressive or stressful situations. He thrives best in situations that are accepting, "peaceful" and supportive. His mother indicated it has been her goal to provide him with a "Shangri-La" type of environment, often at the expense of comfort of the other family members.

Medically, this man was diagnosed as a physical anomaly with obvious congenital abnormalities of the brain stem and lower spinal cord.

A pre-release conference and review of #04's progress in the program indicated there was apparently little benefit derived from counseling. Classroom work showed qualitative improvement but there was no grade level improvement. There was an overall improvement in adjustment to the program primarily in social and group living. This man had a keen interest in pleasing and helping people. In the last few weeks of his stay he also showed an interest in activities that involved other people.

A prevocational shop evaluation indicated that #04 had little potential for skilled work and he needed constant supervision. He was quite attentive to small details - this was most evident when he did janitorial work.

The prognosis for this individual was guarded. It seemed doubtful he would ever function as an independent person. He would be best doing limited work tasks in a well-supervised, structured, and accepting work situation.

RMR:mf

Trainee #05

Prior to admission to the Center on September 24, 1962, this 21-year-old white, deaf male was working part-time in a car wash in the Detroit area. After release from a School for the Deaf, in 1961, #05 was referred to DVR for assistance. However, because of his limited educational background and his inability to read or write, placement on either a job or in a vocational training school was out of the question. Through the efforts of the mother, a job was obtained in a machine shop as a clean-up man; however, it was necessary to lay him off because he could not follow instructions and did not understand orders. After being discharged from his job, #05 lay around his home during the day and ran around at night. This was a constant source of friction in the home and led to some severe scenes between the mother and father. Again the mother turned to the DVR for help and again a placement could not be found. It was therefore suggested to her that she apply for admission of her son to the project program.

At the time #05 was seen for initial screening, the mother stated he had a part-time job in a car wash. He made about two dollars a day. She also indicated he drank a lot and ran around with undesirable characters. She feared the boy was headed for trouble. He was going with a hearing girl and began to consider plans for marriage. At the time of admission #05 claimed he could not read, and rejected efforts to test his reading ability. After six months in the program, testing indicated he was able to read at a 4.6 grade level. A general achievement test bettery revealed the trainee had an achievement grade equivalent of 3.1. This same score was obtained at the School for the Deaf in 1961.

A staff case conference concluded that adjustment to the program was marginal and progress was slight. The subject displayed little real interest in Center activities and his academic record was spotty and erratic. After 146 days of training, #05 was considered ready for release from the Center. Throughout the Staff felt that more time should be spent in the counseling of #05 and that he had to be encouraged to develop an interest in some job or occupation and then work toward that goal. However, he did not cooperate. During training he expressed an interest in body bumping work, but still could not focus on this idea for any length of time.

Drinking and carousing after hours became a problem to the point that it interferred with his activities during the day. Efforts were made by the staff field worker and the DVR liaison man to place #05 in a job training situation as an apprentice car body bump and paint man. This did not succeed. Eventually the trainee lost all of his interest in the program and withdrew from it after 324 training days. The father, according to the mother, said that continued training was a waste of time and money. He felt the trainee was a lost cause and should return home. Follow-up interviews with the mother revealed that #05 did return home, but the father threw him out of the home. #05 took up residence with a hearing family and eventually obtained part-time work as a painter.

Four months after leaving the project he finally obtained a job as a night clean-up man in a bar. He worked part-time during the day as a painter and from 2 a.m. to 7 a.m. he worked as a janitor.

It is interesting to note that drinking was a chronic problem with this person, yet, he did not drink on his job in spite of the fact he had permission to drink all he wanted so long as he did his job first.

The records of #05, while he was a trainee at the Center, were very poor. His overall adjustment and progress suggested he was a very poor candidate for job placement. Yet, follow-up evidence did suggest some change took place. He He has been employed now for four months. This represents his longest period of employment.

TRAINEE #06

This 29 year old, white, deaf male was admitted into the program within a month of its beginning date. #06 was in the training Center 426 training days. He was released to the Michigan Division of Vocational rehabilitation (DVR) Department of Public Instruction for job placement. At the time of admission this deaf trainee was alert and responsive, but unusually immature in his behavior. Approximately eight months after release from the program #06 did obtain full time employment as a day laborer in industry.

Non-Verbal Intellectual testing revealed this individual was capable of functioning in the bright to superior range of intelligence. Periodic intelligence testing revealed a high level of test performance up through the time of release. General academic achievement at the time of admission was extremely low, with the exception of reading. His initial reading level was at the 4.0 grade level at admission and rose to a 5.0 grade level just prior to release. Using a similar General Achievement test as that of the Michigan School for the Deaf, the trainee earned an overall battery median score equal to the 3.3 grade. After six months in the training program the Subject's battery median scores rose to a 5.6 grade equivalent. Five months later the median equivalent grade level dropped to 3.3. These achievement scores typify the Subject's overall performance pattern while in the program.

All areas in which this trainee participated (academic, vocational and social) were pervaded by extreme immature behavior. He lacked social judgment to such a degree that could create problems without effort. The problems this man had in the past with people should logically have made him a morose, sullen and unhappy person. Yet, he was a happy-go-lucky individual who lived for the moment. Pleasure seemed to be his life ambition. His nickname among the trainees was "Chatterbox" because he was always "talking." Prior to release it appeared that much of this "devil-may-care" facade hid much depression and fear of the future.

Some of this man's social problems stemmed from the fact that he came from an over-protected environment almost devoid of culture and social influences. In addition to this poor cultural and social orientation, there was medical evidence to support the notion that as the result of a right, temporal hemmorrhage at the age of 10 months, there was evidence of organic neurologic abnormality involving the right hemisphere of the brain. An EEG examination revealed a normal profile in 1963.

A case conference on the trainee revealed that after 425 days in the program there was little reason to continue him in the program. His lack of motivation to accept training or learn meaningful and helpful techniques that could lead to improvement neutralized further efforts at rehabilitation. Evidence based on testing and observation suggested that although this man was potentially capable, his emotional immaturity and general lack of motivation pointed to an on-the-job training situation of a semi-skilled or unskilled type with constant supervision.

TRAINEE #07

The first man to be released from the project, Case #07, was in the training program only 100 training days. Because of a severe diabetic condition complicated by a steady intellectual and personality deterioration, it was decided that further efforts in rehabilitation would be of little value. Several follow-up interviews with the ex-trainee's mother revealed that he was constant home-care problem. Insulin had become a toxic agent in his system - without insulin life expectancy would be in terms of days yet, with it his life expectancy was only a few years. #07 will never be self-sufficie and eventually he will need institutional care because of a progressive mental deterior tion.

TRAINEE #09

This profoundly deaf, twenty-two year old Negro male was released for employment after 225 days ofprevocational training. #09 came to this Center after repeated failur to obtain employment in the Detroit area. It was #09's desire to get work in the area of dry cleaning. He was trained for this work in a southern school for the deaf. Schoo reports received on this trainee indicated he attended special classes for the retarde deaf for approximately thirteen years.

At the time of admission into the program, #09 was unable to take a reading achiev ment or general achievement test. He was able to add and subtract simple numbers at a 4th grade level. His ability to read lips was low with little or no oral ability. His knowledge and use of the language of signs was insufficient to allow him to take part i a manual conversation.

General adjustment to the program was rapid and interlaced with interest. After 126 training days a general achievement battery was administered. The results indicate the trainee was functioning at the 3.2 grade level. After 58 training days an arithmeti test showed a one-tenth grade point increase. In reading, at the end of the 70th day o training #09 was able to generally read at a 3.4 grade level. General performance in th area of language reflected a pronounced increase after the 8th week. Improvement in arithmetic became pronounced in the 12th week. Reading also began to show a steady improvement.

In general, #09 was seen as an intellectually limited person who could not be expected to function in situations that were not well structured and clearly defined for him. The prognosis for job success was good if he remained in an area that did not demand of him to perform complicated tasks. The project rehabilitation counselor, with the cooperation of the Michigan Employment Securities Commission, obtained a job for #09 as a stock clerk and kitchen helper, at night, in a fashionable Detroit area restaurant. Follow-up interviews with the employer indicated he was satisfied with #09's job perform ance. In the nine months he had been employed, the Subject received several salary increases and has been given a day job as a porter and janitor in a motel owned by the restaurant. Eventually this job ended because of misunderstandings on the part of the employer. Events revealed the ex-trainee was not at fault and that an advantage had bee taken of him. In time another full time job was obtained as a kitchen helper.

TRAINEE #13

After 446 days of training, this 48 year old, deaf, white male was released from the project and placed in a job as a kitchen helper (employment was in the same restaura as Case #09). After little more than three months of employment this ex-trainee demonstrated little, if any,talent for this type of work. Employer comments concerning job performance suggested #13 lacked resourcefulness - he could not shift from one type acti ity to another. He was unproductive - he preferred to let other people do his work. He did not work well with other people - could not work as part of a team. He was careless with equipment and broke dishes. He would not take responsibility for his own actions and shifted blame to other people. Many of the behavior characteristics observed while he was on the job were in evidence while in training. As a result of this job failure he was returned to the Center on March 9, 1964.

This trainee was referred to the project through the Ionia State Hospital where he had been a patient for twenty-years. Adjustment to the Center program seemed to come easily for this man. His age (48 years) and the long hospital confinement (20 years) seemed to partially explain away his low-level of interest in people and his inhibited (slowed) physical movements.

TRAINEE #13 conti.

This man accepted the academic routine and demonstrated an interest in improving his reading and communication skills. It was only during his last month in the program that he displayed any vocational interests - they were vague and not specific. Very little interest was expressed in vocational shop activities. Perhaps this was partially due to the fact he was clumsy with tools (a little finger on the left-hand was missing).

An origianl psychological evaluation (with follow-up testing) indicated this was a well oriented individual whose general academic achievement level in the 5th to 6th grade area with an 8.9 grade level ability in the area of arithmetic. Intellectually, #13 had the potential for functioning in the bright-normal range of intelligence; his verbal IQ was in the average range which is unusual for a man so socially and educationally deprived. Also, he had an unusually high abstract ability level.

The long years of hospital confinement left their mark on this man in terms of his low level of motivation (in spite of his academic interest). He overcontrolled feelings and withdrew from situations that remotely appeared to be unpleasant. He did not associate with the other men and seemed to hold himself back - this was less of a problem as he progressed in the program.

After a second return to the Center, a new program was arranged which consisted largely of personal counseling, vocational counseling and group therapy. In retrospect, impressions of this job placement were that the trainee was ill-prepared and ill-equipped. It was too much of a transition to make after twenty years of closed institutional living. Personal counseling revealed the trainee did not understand what was expected of him on the job and he recognized, to some degree, that he did not like the job, and consequently did little to improve his situation. It was interesting to recall that at the time #13 was released for job placement, the prognosis was good for job success, but not in the particular job area in which he was placed. However, because this man needed the opportunity to try himself after his years of confinement, it was felt that since the employment was available he should be given the chance.

Eventually #13 was placed on a more suitable job as a clean up man in a motel which he has held for over a year. He obtained living quarters in an apartment and functioned as an independent person.

CHAPTER VIII

IMPLICATIONS OF PROJECT OUTCOMES AND COST ESTIMATES

This chapter has undertaken the responsibility for presenting to the reader an analysis of the project results in terms of their significance in relation to the project goals and their underlying assumptions.

In order to make the material more meaningful this chapter will be presented in two major parts:

1. Implications of Project Outcomes
2. Cost Estimates (of training)

IMPLICATIONS OF PROJECT OUTCOMES

Review of Project Goals and Assumptions

The primary goals of the project were:

1. Establishment of a physical plant equipped and staffed for the prevocational training of multiple-handicapped deaf men,

2. Development of a prevocational program to operate for a three year period.

3. Administration of a prevocational program that would result in the development of readiness, in these deaf men, for either immediate job placement or vocational training.

4. Resolution of the following questions:

    (1) What pattern of factors appear to predict success or failure?
    (2) How much time does the rehabilitation of individuals at specified levels of development and aptitude require?
    (3) What are the costs of rehabilitating individuals (to the point of feasibility for either employment or vocational training) with differing levels of need and potential?
    (4) What improvements can be made in the rehabilitation process as a result of this experience?

The general assumptions upon which the project was predicated were:

1. With concerted efforts to help them, the multiple-handicapped men will not improve in status and may deteriorate.

2. The disciplines of psychology, social work and education posses techniques which could be coordinated and directed to the rehabilitation of multiple-handicapped deaf men through the median of an interdisciplinary team.

3. All the deaf men, with whom the project will be concerned, would benefit, and some sizeable (but unknown) proportion of them could be brought to a state of readiness for full-time, paid employment.

More specific assumptions were: (1) A sufficient number of deaf men in the state did exist who needed this type of program; (2) A sufficient number of individuals in the rehabilitation area would welcome such a training center for deaf; and (3) The deaf population, in general, welcomed the initiation of such a program by way of participation.

General State of Knowledge

At the time the project proposal was prepared it was apparent that the problems of the multiple-handicapped deaf were far from being understood. At best, this group of deaf persons could only be identified in very broad general terms. What was lacking was:

1. Information on this subgroup in terms of detailed identifying characteristics of the subtle aspects of the disorders as they are superimposed on the already existing major deficit.
2. Data on the psychosocial and vocational adjustment problems of this subgroup.
3. Research information that would be helpful in organizing a remedial program that would be most beneficial to this subgroup.
4. An adequate definition of success and failure in rehabilitation.
5. Methods for the systematic evaluation of rehabilitation efforts.

Problems in Training Approach

The teaching staff relied primarily on traditional class room teaching techniques. Insufficient interest was generated toward the use of teaching machines or audiovisual methods. In the last months of the program, an opaque projector was used.

Had funds been available for an experimental program using teaching machines in some form, the added problem of appropriate programmed material would have been a serious factor in terms of staff time required for such an innovation.

In the last year and one-half of the program, the experience of the research staff strongly indicated that the original proposal, because of the urgency of the needs of the clients, had not only over-emphasized the demonstration aspects but forced the project to begin while still lacking important and necessary information about the multiple-handicapped deaf. What was needed was:

1. Accurate information of the specific employment pattern of the underprivileged deaf adult.
2. Normative data for aptitude, achievement and personality tests and measures that may be profitably utilized with the underprivileged deaf.
3. Experimentally verified techniques for conveying prevocational knowledge and skills - specifically those concerned with illiteracy.
4. Experimentally demonstrated and feasible methods for coping with severe personal maladjustment.

These lacks spread their influence throughout all phases of the project from beginning to end. The area most affected was the establishment of a consistent, reliable method for evaluation:

1. The individual trainee,
2. Trainee progress in the program,
3. Personal characteristics that could be treated systematically; such that predictions of success or failure could be obtained after release from the program.

It seemed evident that in order to determine the effectiveness of this type of program, it would be necessary to employ evaluation procedures which possess the following characteristics:

1. relevant to the specified goals of the training program;
2. adatable to the limitations of the trainees;
3. diagnostic in report -- displaying the strengths and weaknesses of the program as a whole as well as those of the individual trainees;
4. recognize the role of compensatory as well as inhibitory aspects in the total functioning of the individual;
5. feasible in terms of time and expense involved in their procurement;
6. objective not only resistant to possible bias on the part of the project staff and other "interested" persons but also yielding consistency of measurement from time-to-time for the same individuals and also between different scorers, raters, or judges.

Normative Data

Among those factors that made achievement of an experimentally-sound evaluation system for the project extremely difficult was the lack of relevant normative data.

Approximately four years ago a conference, sponsored by Vocational Rehabilitation Administration was held at Gallaudet College on "Research Needs in the Vocational Rehabilitation of the Deaf." The report of this conference assigned a major priority to the need for tests for the deaf in the areas of intellectual capacity, educational achievement, psychosocial adjustment, vocational aptitudes, and vocational interests for which norms would be available for both a deaf and a normal hearing population. This critical need is still far from being met, especially for the adult deaf. A similar high priority for research was expressed for instruments that could measure communication potential and ability of the deaf.

This present project has not been able to remedy this general situation with respect to basic research on psychological assessment of the adult deaf, although a beginning in this direction was made toward this objective - but not sufficiently early to provide a satisfactory base for trustworthy assessments.

Sample Size

Another significant factor relating to the evaluation program was the small size of the trainee sample. This difficulty was intensified by the fact that about half of the trainees had already been released from the program or were in the middle or final stages of training when some basic evaluation measures were established. For those trainees it was no longer feasible to obtain an expanded set of vestibule or even early training measures.

The small number of trainees from whom the fuller information was obtained (less than 25) could easily lead to spurious results as the consequence of chance factors. This problem was especially critical for the outside-of-the program criterion measures. The desirable solution would have been an expanded period of training, much beyond December, 1965 and an increase in the number of trainees. Had funds for such an extension been granted, then it would have been possible for the staff to carry out controlled research designed to increase the effectiveness of the training program.

The Non-Feasible Adult Deaf

As was stated in Chapter I, this project was not concerned with the deaf individua in general, or even with the typical adult deaf, but with the "non-feasible" deaf adult or the "hard-core" deaf. The significant question here was: Why is this person "non-feasible" for vocational rehabilitation?

Those results obtained and presented in Chapter III suggest that this question is much more difficult to answer than appeared at first. (1) Was it educational lack? Table 24 (Chapter III) shows that only two trainees had no formal training and that 31 of these deaf had some form of educational experience ranging from as little as 4 years to 22 years. (2) Was it low intelligence? Virtually everyone of the trainees that had some basic means of communication had scores in the dull-normal to normal rang (85 to 109 I.Q.) on the performance scale of the WAIS or on the battery of non-verbal tests of intelligence used by the project psychologist.

Clearly, for these men, previously used methods of instruction have failed. The failure seems to be in the language area with man; in social actions and personal adjustment with others. Evaluation efforts should have been directed at the basic pattern of failure for these men.

Assistance in coping with emotional problems could make little progress until an underlying foundation of communicative ability has been established. One negative possibility, for some of the trainees, was that the organic defect that produced deafness also involved brain damage extensive enough to produce a generalized aphasoid condition. Neurological examinations revealed for some men gross signs of organicity, but these seemingly were or can be of little help while the modern behavioral approaches to the study of aphasic assesment in non-deaf individuals are still in its experimental phase. (e.g. Osgood, C.E. and Miron, M.S., Approaches to the Study of Aphasia, Universit of Illinois Press, 1961.)

Success or Failure Patterns

The myriad of data we have collected is confined to a limited population. As was pointed out earlier, to rely on this sample could lead to spurious conclusions. At best all we can do is infer.

Utilization of the project evaluation results

There is a vast difference between an evaluation system which has the objective of suggesting modification and extension of the present project at the present location with retention of all or a substantial majority of the project staff and an evaluation system for the project which can be used for potential justification of similar projects on an operational basis through the country. The second type of evaluation rigorously carried out would require independent assessment of such factors as project staff training, capability, and enthusiasm; of physical locale; of level of cooperation with local schools for the deaf and the various state and community rehabilitation agencies; of level of employment in general and of level of employment of the deaf in particular, etc. All of these factors would need to be considered in making a determination about additional centers.

The difficulty of such independent assessment of situational factors is not restricted to work in vocational rehabilitation or work with the deaf. It is a standard problem in educational research and has often been overlooked by competent researchers. To determine the adequacy of a new educational procedure, for example, it is necessary to sample across different school systems because the nature of the instructional staff, the socio-economic level of the student body and the general community, geographical location, etc. may be interactive with the success of the educational procedure itself.

To the extent that other centers and areas share the qualities of the Pre-Vocational Center at East Lansing, its community relations, they should display a similar level of success. But, nothing can be said about how far from the local conditions these other centers could vary. Some of the local conditions may be quite irrelevant; some highly essential.

Outside criterion measures

It is a truism that the validity of a training program depends not on the performance within the training program itself but on or in the activities for which the program was to prepare the trainees. Yet, this truism can be very misleading if applied in a routine manner. For example, medical school success is not predictive of medical case success for those physicians that go into public health work, or teaching, or research, or hospital supervision. Even more complex are the cases of M.S.'s who are best-selling authors but carry on no medical work at all.

Our intent, in the last year and one-half, was to use multiple external criteria' in coping with this problem. Our external criterion was to have included: (1) actual employability; (2) acceptance or potential acceptance by the Michigan Division of Vocational Rehabilitation for job placement or further vocational training; (3) ratings of job success and/or job potential by non-staff individuals with experience with the deaf. In addition, we intended to use follow-up studies on the men in terms of (a) job success and satisfaction; (b) retention of training program skills and knowledges; (c) family assessment of improvement in psychological adjustment and capability.

Again, a cautionary note must be sounded. The inherent danger of our small sample of cases was most potent in the area of outside criterion measures and it is in this area where this danger was the least amenable to amelioration. While our sample did show some degree of external success (compare table 32 and table 4 with Employment Record of Project Trainees as of October 15, 1965), a larger sample might show a much lower degree of external success. Conversely, our small sample could have displayed a poor record of placement, while a larger sample might exhibit an excellent percentage. The first situation could exist if our small number of placements was made only through the cooperation of a few sympathetic and interested employers, which is the true picture. The second situation could arise, by chance, if a high portion of the trainees had the type of psychological deficiency that just could not be coped with in the time span available.

From the standpoint of percentages, based on the number of deaf men who went through this pilot program (33) one should hesitate to speak of successes or failures since we would have to consider the trainees in relation to their immediate situations at the conclusion of their training.

By considering immediacy, we would overlook the long range influence the training may have had. There is, of course, no way to do follow-up work.

From the standpoint of job placement during and after the pre-vocational experience, 19 trainees obtained full time employment, 13 of whom obtained jobs that could be broadly classed as semi-skilled. Seven men were placed on unskilled jobs; one man obtained a skilled job.

Perhaps, by placing a label, "success" or "failure" on the pre-vocational outcome, we contaminate other more useful bits of information that could be more important. That is, what was accomplished was that these otherwise unemployable men were placed. This represents a milestone for most. They had exposure to the work world and perhaps were able to develop a set for employment.

Some questions which we must ask are: (1) Were the jobs we obtained the result of the training? or (2) Were they obtained because of an undersupplied job market which, in any event, the men might have obtained through just interested, and informed aid? (3) If jobs were less available could these same men obtain the same type of employment with specific help?

As will be seen later on, these questions cannot be answered on the strength of the research evidence we have obtained.

In reality, we cannot say with certainty what those factors are that indicate job success or failure with our small sample. Too many other questions remain unanswered.

Implications Based On Data

Our falure to identify the predictive factors should in no way be viewed as a total failure. In fact, as a result, we can clearly point the way whereby this problem could at least be logically studied so that orderly procedure could be developed.

Before predictions can be made there must be a wealth of background material that will adequately define that specific populations of concern, their problems and, most importantly, the range and nature of their disability(ies).

What is needed then is:

1) An Adequate Population Sample of Underprivileged Deaf

Little of what is known about the occupational conditions among the deaf can be directly applied to the task of pre-vocational training for the multiple handicapped or "non-feasible" deaf. Two major reports, (Lunde and Bigman, 1959; Rainer, 1963) and one minor one, (Dunn, 1957), have touched on this area and afford suggestive information. All, however, appear to have failed to adequately sample the less successful, the less educated, the less socialized.

For example, one well-planned study (Rainer, 1963) reports that more than 93% of their male sample had held, at the time of the interview, the same job for more than three years. Presumably less than 7% of the deaf male had employment difficulty. Yet, some experts in the field of the deaf claim that a far higher percentage of employment difficulty exists. The methods used for locating the deaf respondents and for obtaining biographical information from them in all the available studies seem to be such as would produce a sampling bias that underestimates the under privileged deaf.

Such a survey is intended to maximize the likelihood of including the underprivileged deaf regardless of the possibility of undersampling the deaf at the upper end of the scale.

Even if the proposed survey does not achieve a higher percentage of job history interviews from the underprivileged deaf group, the nature of the biographical, personal and social information obtained will be of greater relevance to major policy questions in prevocational training.

2) Job History Information for Realistic Training Goals

Any rehabilitation program for an underprivileged group must resolve certain basic policy issues before it can meaningfully begin. In the case of the underprivileged deaf, it is important that the training objectives neither be set too low or too high.

If they are set too low, the training may be successful. However, the ensuing change in employment potential may be so slight that the candidate will be forced out of employment whenever business conditions worsen. It is not realistic to train men to hold jobs only under highly prosperous conditions.

If the training objectives are set too high, an occasional accidental success may be obtained, but the failure rate of the rehabilitation program will be so great as to be self-defeating.

3) Realistic Standards for Personal and Social Adjustment in Relation to Employability

Those who have worked with the deaf intensively are aware of the greater frequency of instances of immature social and personal adjustment. For example, Edna S. Levine reports, "1) evidence of pronounced underdevelopment of the deaf subjects in conceptual forms of mental activity, despite normative mental potentials; 2) indications of marked emotional immaturity; 3) substantial lags in the comprehension of interpersonal relations; 4) highly egocentric life perspective; 5) a markedly constricted life area; 6) rigid adherence to the book-of-etiquette code as standards for behaving and even for feeling." (Levine, 1963)

Our experience with the underprivileged deaf confirms Dr. Levine's statements. In fact, we must state even more firmly the manifestations of regidity, lack of autocriticism and general immaturity. Nevertheless, it does not necessarily follow that any one of these undersirable characteristics or even a combination of them will completely preclude employability.

The survey should allow a statistical determination of those biographical, social and personal characteristics of the deaf men which:

a) permit or enhance employability even where little or no rehabilitation assistance has been given:
b) are not related to employability in any direct way although they may relate to general well-being;

c) are detrimental to either securing a job, holding it for any length of time, or for obtaining advancement of any kind.

4) Collection of Normative Test Data

In the summer of 1964 Professor A.M. Barch of the Psychology Department of Michigan State University surveyed our present prevocational training program for non-feasible deaf adults. In an analysis of the strengths and weaknesses of the program submitted to the Sensory Study Section of the Vocational Rehabilitation Administration early in August, 1964, he stressed the necessity of an expanded evaluation program.

The analysis noted that the achievement of an experimentally-sound evaluation system for our project (OVR RD801-S) or any other program dealing with the deaf would be extremely difficult. The major obstacle was the lack of relevant normative data for young deaf adults. It is noteworthy that the 1960 Gallaudet Conference on "Research needs in the Vocational Rehabilitation of the Deaf" also assigned a major priority to the need for tests for the deaf in the areas of intellectual capacity, educational achievements, paychsocial adjustment, vocational aptitudes and vocational interests.

When Dr. Barch accepted the role of Research Design and Psychological Consultant to the prevocational project (OVR RD801-S), he indicated that the first stage of activity in the expanded evaluation program would require collection of relevant normative data at a mid-western school of the deaf with students in the 16 to 21 year age range. It was clear, even at that time, that only an initial effort could be made toward obtaining the necessary norms on a variety of test instruments and devices.

Even if the project (OVR RD801-S) had had the time, staff, and funds available to obtain normative data on a wide variety of tests from a within school population, there would still have been a significant and profound gap in the normative test information. Namely, the data would not have contained information about two critical groups:

1) Individuals less than 21 years of age who left school environment before the maximum permissable age of attendance.

2) Individuals 21 to 30 years of age (the young adult group).

A job history survey, designed not only to provide economic and biographical information for our young adult sample, would also permit the collection of normative test data from those two critical groups.

RESEARCH DIRECTED AT IMPROVEMENTS IN PREVOCATIONAL TRAINING FOR YOUNG DEAF ADULTS

Future research should focus on two distinct but highly interrelated areas of deficiency in the underprivileged deaf. These are:

1) literacy and communicative ability;
2) psychosocial adjustment.

Language Deficiency

General considerations--Several authors (Rosenstein; 1960; Furth, 1964) have recently challenged the view that deafness must, in most cases, automatically carry with it a limitation of cognitive development. Furth has shown how the poorer performance of the deaf on cognitive tasks often does not occur, and when it does, it can be most parsimoniously explained by (1) lack of general experience which may be eliminated by adulthood; or (2) task characteristics which depend on linguistic habits.

We are in firm agreement with these authors and others of like mind provided that the argument is not overextended. The fact is that a predominant number of activities in our daily lives do require acquisition and use of linguistic habits. The wide predictability of verbal type instruments in our culture is a clear indication that such ability cannot be ignored. It has become fashionable, of late, to ignore single factor tests of general intelligence such as the Stanford-Binet. Yet it is worth noting that the AGCT (with two of its three types of items heavily verbally loaded and its third item type moderately so) made excellent predictions in activities ranging from completion of basic military training, graduation from primary flight school in the Air Force, to survival rate in front-line units in Europe during World War II.

Compensatory abilities are much more often the exception rather than the rule. A deaf man who is language deficient has almost an insurmountable obstacle to overcome in his search for continuous employment. In our verbally oriented culture it is imperative that one of the major objectives of our prevocational program be enhanced communicative ability. The other major objective, to be discussed later, is increased personal and social awareness and its translation into acceptable social behavior.

A similar problem exists with the expectation that increased general experience by adulthood will eliminate cognitive retardation. The underprivileged deaf, by adulthood, have failed to obtain this general experience. In a substantial proportion of cases they actively resist exposure to new experiential situations and tasks.

Experimental Approach

A concentrated attack on the language deficiency on those trainees who are functionally illiterate--not only in terms of reading and writing, but also in their understanding of and the use of the language of signs is needed. The prime operational principle should be a highly controlled pattern of feedback. This control should be exerted by one-to-one teaching arrangements, by use of an MTA teaching machine, by modifications of slide-projector, film-strip, and movie projector multiple choice systems.

The starting point and the main linguistic core should be the language of signs. However, experimentation with the use of unique signs (in the middle stages of training) that would carry functional(syntactic) meaning and thus bridge the gap between the language of signs and English grammar should be done. Diagnostic discrimination testing and training should be applied where needed.

One weakness of many contemporary programming and immediate feed-back projects has been the tendency to assume that learning (achievement) of the "correct" response will always be self-reinforcing. For the educationally underpriviledged, especially for those who have developed negative attitudes toward schooling activities of all kinds, this is obviously a treacherous assumption. Thus, part of the research approach should consist of devising procedures for linking events we know to be reinforcing by independent observations to the acquisition of desired responses in the training tasks. Toward this end heavy reliance must be placed on primary reinforcers in the early training stages: candy, cigarette, break privileges, choice of male or female tutors. To facilitate the value of candy-cigareete type of reinforcers, strict control over the personal cash available to each trainee should be maintained.

Psychosocial Adjustment

General Considerations--Mead (1934) took the theoretical position that social behavior, as a reaction to environment "gestures" (cues), is dependent upon the ability of individuals to interpret what other individuals mean and communicate understanding by appropriate action or reaction.

The most obvious and persistent hinderance to effective diagnosis and psychotherapy for disturbed and maladjusted deaf lies in the difficulty of communication between psychotherapist and client (Rainer, et al, 1963^{a}).

As Wolberg (1954) pointed out, there are necessary initial conditions for insightful reparative psychotherapy. The most favorable of these conditions for therapeutic success is the ability of a client to comprehend at a highly verbal intellectual level. Thus, it is not surprising that Rainer, et al (1963) reported that out of a population of 217 deaf outpatients only two were found suitable for a modified form of insightful therapy with modified goals.

Additional barriers were encountered by Rainer, et al (1963) in the use of various forms of psychotherapy, ranging from therapist difficulty with the language of sign to personal characterological problems of the deaf patient.

Group Therapy in Prevoational Program (RD801-S)--In the early stages of the prevocational program (RD801-S), group therapy was employed as an experimental approach in the personal adjustment portion of the center program.

A number of different approaches were used over a two year period. These various experimental approaches included: 1) regulating numbers in each group; 2) similarity of age; 3) placing older trainees with younger trainees; 4) heterogenous and/or homogenous in relation to problem areas; 5) non-supportive role by therapist; 6) directive, supportive; 7) role playing; 8) acting out, cathartic ventilation; 9) mutual discussion of problems--more in the form of an informal "bull session"; 10) instructive approach pervaded with a form of benign authoritarianism on the part of the therapist.

After fourteen months of trial and error work it became evident that in spite of language growth and improved academic communication skills of those trainees in therapy, they continued to function independently of each other and developed little insight into either their own personal problems or those of the other trainees of their group.

Like group therapy, personal, one-to-one, counselling experienced the same shortcomings. Simply put, desired information was not being transmitted to the trainees--if anything they appeared to be confused.

Observed common behavior displayed by those trainees in group therapy and in one-to-one counselling situations included such behavior as: 1) spontaneous temper outbursts; 2) tangential thinking; 3) unusually shortened attention spans; 4) personalizing generalized information; 5)"scape-goating"--blaming each other, blaming parents and society for problems and 6) perseverative thinking--pursuing a single subject--rigidly failing to recognize its irrelevance to reality.

It was grossly obvious that the observed behavior was either a clinical indication that the trainees all displayed varying symptoms of behavior disorders that would not lend themselves to any depth psychotherapy, or the overall theoretical approach was incompatible for these deaf.

New Approach--A realignment of approach and grouping was made. Those trainees in the younger age range (18 to 25 years) were placed by IQ achievement level, and severity of personal problems in one of two groups. Those older men who had consistently low achievement, low motivation to achieve and take part in group activities were placed in one of two separate groups.

All groups were exposed to a training period in which a variety of terms, connoting emotions were discussed and agreed upon as to their meaning. Some of the terms used were: hate--love--anger--mother--father--other people--suspicion--sex--like--dislike--honest--truth--etc.

The results of this different approach indicated that for the younger men, a standardized understanding of words led to some common basis for talking out here-to-fore uncommunicated thoughts and emotional feelings.

In each therapy session old words were used and new ones introduced by the therapist and, in time, the trainees. As the use of words increased and their meanings commonized, there was more catharsis. This also introduced order in the therapy sessions with an increased interest--in the last five weeks of therapy it was noted the younger men arrived early for therapy, each with his own chair. In prior months this enthusiasm was not in evidence.

Results obtained in the older groups were not dramatic, perhaps because of the length and severity of their problems and an over-all lack of motivation complicated by various forms of psychopathology.

Planned Therapeutic Approach

Experiences in the use of various forms of personal and group psychotherapy in the project (RD801-S) have to some extent varified the findings of Rainer, et al (1963), however, these experiences have also suggested that new approaches, tailored to the language limitations of deaf, merit further intensive investigation.

In an effort to implement and enhance the social and personal adjustment aspects of a prevocational program a more compatible form of group therapy is needed for deaf. The principle features should include a closely regulated presentation of basic language, and work meaning to afford the client one means of expression--simply supply him with a vocabulary so that he may talk about his problems, fears or other disturbing environmental factors.

Areas of Concern in Group Therapy--1) personal problems; 2) social problems (1 and 2 will be treated as separate categories in spite of inter-play upon each other); 3) vocational aspirations in relation to personal obvious handicap of deafness; 4) long versus short range goals; 5) social and civic responsibilities related to family and marriage.

Therapeutic Approach--1) make up therapy groups not to exceed four men, unless conditions warrant changes; 2) therapy groups will be designated control or experimental groups; 3) teach both control and experimental groups a basic vocabulary made up of words denoting emotional feelings, such as love, hate, anger, problems (personal, social)--efforts will also be directed at establishing attitudes and understanding moralistic concepts.

a) Methods for teaching basic words and concepts:

1. sign
2. group discussions
3. role playing
4. psycho-drama (modified)

In addition to supplying the group therapy client with a working expressive vocabulary, other controlled approaches should employ movies and slide projectors depicting social, personal and occupational situations--the films will be problem oriented.

Since reward and penalty systems play roles in various forms of learning, it is thought this approach would function as one way to keep and stimulate interest in those activities concerned with adjustment.

Training Time

Original hopes were that the majority of trainees would remain in the program for a period of two to four months, depending upon the extent of the individual's problems.

In reality, the average training time far exceeded original estimates (table 31). It can be seen that the average time was 368.2 days. Only 4 of the 33 trainees were released after six months in the program.

Some obvious reasons or explanations as to why this excess training time occurred are:

1. Absence of clear signs of readiness for job placement or further vocational training.
2. Trainee problems required longer training time - this was not anticipated to occur on such a wide scale. That is, early basic preparation was so lacking that more time was required for upgrading.
3. Staff hesitancy to release men without assurance that the man would go to an immediate work or training situation.

4. Unavailability of jobs or training situations outside of the local Lansing area.

The extended training period no doubt has provoked questions in the minds of the readers and, definitely some occur in the author's mind. Some of these questions might include the following:

1. Was the length of time in excess of the anticipated time, a function of the severity of the disability?
2. Was the longer training period a function of the project's inability to recognize readiness?
3. Was the program design too inadequate and, therefore, did not reach out at the basic problems of the trainee?

The data we have collected does point to the possibility that lesser time spent on training would have been wasted in view of the sorts of problems most of the trainees had at the time of admission.

Whether or not the method of dealing with the various problems was correct cannot be proven. Examination of the various test retest data indicates little, if any, growth occurred for those trainees who remained the longest.

Day to day contact with these men seemed to suggest that the positive behavior changed we did view did not lend themselves to any reliable measure.

Drawing from past training experiences and based on the assumption that future prevocational trainees would have similar types of problems and would come from the same general population of underprivileged deaf, it is possible to speak of definite time limits for training if we include other factors.

In a few cases a training period as little as four months might be beneficial, although the level of improvement obtained in basic skills of language, communication, psychosocial awareness may be minimal under our present training procedures. In other cases a training period of less than two years would not be beneficial if we were forced to rely on the methods and techniques that have been used with the deaf to date.

Clearly, the cost to the social agency or to the individual for prevocational training could be quite substantial. This cost could be a sound investment in the individuals' future when viewed against the possibility of thirty or forty years of welfare support. But the return on the investment made will not materialize if the level of improvement does not result in an employment potential adequate for today's and tomorrow's job market.

Unfortunately, the levels of achievement reached--even with the best of presently available methods and techniques--do not appear adequate when one considers the threat to economic well being that already exists for unskilled labor. Even the job of a custodian's helper has shifted from simple manual labor to activities involving technical skills.

Thus, a clear need exists for research designed to enhance the skills that can be developed through a prevocational program and to reduce the cost of such a continued program. The optimal setting for such a research endeavor is a functional ongoing prevocational training program. Such a setting could bring a variety of insights to bear on this problem--clinical psychologists experienced with the deaf, experimental psychologists specializing in learning and language behavior, teachers of the deaf, vocational rehabilitation placement personnel, and social workers.

PROJECT EXPERIENCE

Several unexpected outcomes of the project center around the uniqueness of the program and the type of handicap it served.

Because of local and state publicity a number of individuals in and around the Lansing, Michigan area became interested in the prevocational work being done. This is readily evident by the list of persons who took interest in the project.

For those graduate students in speech and audiological training, an unusual opportunity was presented to them for a very unusual training experience.

This circumstance is even more notably true for those graduate students in psychology.

Problems that had been academic in the class room became real. As an unexpected consequence these students were presented with a rare research opportunity as well as a basis for possible specialization in the rehabilitation. The chances for this type of experience, had the project not existed would have been quite slim indeed.

Most certainly, one result of this program was that a community has been made more aware of the occupational problems of the deaf.

COST ESTIMATES (Of Training)

General Income and Disbursement

Treasurer's Report: From 1 January 1962 through 31 December 1965, a total of $263,371.29 of federal money was expended on Vocational Rehabilitation Administration RD-801-S Research and Demonstration Project. The Michigan Association for Better Hearing, supported by the Michigan United Fund, contributed $70,378.00 toward the project in services (MABH staff), supplies and office equipment.

The percent contribution of federal money for four years of operation is as follows:

Category	Per Cent
Salaries	63
Employee Benefits	14
Project Overhead	07
Educational Supplies & Equipment	06
Student Maintenance (Including medical costs)	04
General Project Costs (Travel & other)	03
Research Costs (Consultant & Research Assistants)	03
Total	100%

Salaries		165,425.32
Employment Expenses		
Social Security	4,270.25	
Retirement	4,224.30	
Hospital Insurance	6,444.68	14,939.03
Overhead		
Rent	11,520.79	
Utilities	2,609.19	
Telephone	2.072.30	16,202.28
Educational Supplies & Equipment	1,266.10	
	1,093.35	
	8,056.53	10,415.98
Student Maintenance		37,572.19
Student Medical Costs		735.00
Research Costs		
Consultant & Research Assistants	9,635.25	
Research Supplies	411.54	
	$10,046.79	

The distribution of federal funds over the four year period amounted to an average operational cost of $65,842 per year. With the addition of the M.U.F. contribution ($17,594 per year) the average cost per year rose to $83,436 or $6,953 per month of operation.

When considering costs it is difficult to exclude the 27% contribution of M.A.B.H. since basic office equipment, supplies and services would have to be purchased by an operating training center dependent upon a limited income source.

It can be seen from the above, costs ran exceedingly high. The greatest cost burden was in the area of staff salaries and benefits.

The average cost per year for 33 trainees amounted to $10,250 per year or approximately $835 per month.

These figures reflect an average cost and do not take into account that costs per student varied according to the number in training at one given time. Costs, therefore, decreased per student as the enrollment increased.

1964 Cost Study

In 1964 a cost study was made on 7 trainees for a 198 day period. The costs are reflected as follows:

Average Training Days	198
M.A.B.H. Services	3.96
Professional Services	16.95
Meals	2.00
Rent	1.01
Transportation	.26
Other	.71

Average cost per day	$24.89
Average cost per man	$4,928.78

The cost for training 1 man for 360 days amounted to $7,376.

It is clearly evident that the distribution of costs per man over the four year period was considerably higher.

There are at least three ways that costs can be broken down:

1. Average cost per month of project based only on federal money given.
2. Cost per trainee month based on assumption all expenses derived from federal money.
3. Cost per month less research and director's cost.

In the first and second instances the costs per month based on federal money for 33 men over the 4 year period amounted to $7,980 per man per year or approximately $23 per day per man.

If cost per trainee less research cost were discounted it is seen that the cost per year would be reduced by about $550 per year per man (using the research cost estimate of 37%) or about $7,421 for 360 days of training.

Table 31 shows that 33 men spent and average of 368.2 days in training. In terms of cost per day this amounted to approximately $22 per man per day.

In the strictest sense this amounts to hair splitting since a rehabilitation center of this type could not operate without professional psychological services. The research costs, spread over a four year period actually amounted to less than 4% of the total budget expended. In terms of dollars per man per year this amounted to less than $25 for 33 men (for the four year period).

Costs for rehabilitation of this type are bound to be high because of the need for specialized help and adequate training facilities. In addition, this type of center will not serve a large number of clients at any one given period of time, therefore, these costs most probably would remain above those expected for other types of handicapped persons.

Other estimates of cost compiled by the administrative staff, but not using the same cost formula used by the research staff, have advanced the idea that:

1. For ten men for one year training costs would amount to $4,601.
2. For 30 men the training costs would be reduced to $1,524.

Both sets of figures do not include any services by a professional psychologist.

SUMMARY

The project, as conceived, addressed itself to a rehabilitation problem area in which generalized techniques of training would offer heretofore unavailable assistance to a special handicapped group of deaf.

The major underlying assumption which guided the project was that with training ... class room instruction and practical but limited work experience ... the otherwise unemployable deaf male could be sufficiently upgraded and prepared for some type of limited employment or further specific occupational training at a rehabilitation training center.

To this end there was some limited success. That is to say the majority of deaf men who entered the center training program did obtain some type of employment.

A natural and expected question arises: Was this employment due specifically to the program? Evidence for the moment indicates that a learning plateau was reached for most of the men in the sixth to eighth month of training. Their academic skill improved little beyond the level they had at admission, but there was a qualitative evidence to indicate they did broaden out at their level. For example, in the matter of communication skills, the language of signs for most was primitive and quite limited. Exposure to formal instruction did broaden this skill for the majority which put these trainees more in contact with other trainees as well as other deaf outside.

The small sample size, the changing characteristics of the clients, the remedial program, and the employment situation preclude a ready listing of recommendations. The reader is advised to inspect the section of Chapter VIII concerned with project implications with care. Otherwise, rather misleading interpretations may be drawn from the apparent success of the project.

LIST OF TABLES

Table No.	Subject	Page
2	Summary of Sources of Information	137
3	Statement of Problem (Reasons for Referral)	138
4	Job Experiences	139-140
5	Childhood History (Birth)	141
6	Childhood History (Development)	142
7	Childhood History (Diseases)	143-144
8	Childhood History (Other Children in Family)	145
9	Childhood History (Parents)	146-147
10	Childhood History (Parents, Cont.)	148
11	Childhood History (Interaction of Parent & Child)	149
12	Childhood History(Parents' Adjustment to Handicap)	150-151
13	Childhood History (Parents' Adjustment to Handicap,Supplemental)	152
14	Childhood History (Child's Adjustment to Handicap)	153
15	Childhood History (Personality Traits - 1)	154-155
16	Childhood History (Personality Traits - 2)	156-157
17	Childhood History (Personality Traits - 3) Behaviorial Problems Peer-Group Relations	158
18	Childhood History (Personality Traits - 4) Behaviorial Problems	159
19	Adult History (Environment, Home & Social Status)	160
20	Delinquency Quotient	161-162
21	Adult History (Additional Psychological & Physical Handicaps)	163-164
22	Summary of Trainees Family (Collateral) Medical History	165
23	Summary of Religious Affiliations of Trainee & Family	166
24	Childhood History (Educational)	167
25	Summary (Trainee Age at Onset & Etiology of Hearing Disability)	168
26	Demographic Data on Trainees	169
27	Summary of Physicians' Reports	170-171
28	Audiology (Decibel Losses in Ranges)	172-173-174
29	Average Speech Range Loss in Decibels	175
30	Hours Spent on Each Training Activity	176
31	Shop Report Summaries on Project Trainees	177
32	Hoke & Retherford Tool Test Scores of Project Trainees	178
33	Summary of Hoke & Retherford Tool Test (Deaf School Sample)	179
34	Employment Record of Project Trainees as of 10/15/65	180
35	Teachers' Ranking for the Various Criteria	181
36	Intercorrelations Among the Various Criterion Rankings by Staff	182
37	Intercorrelations for Various Tests Given to Project Trainees & for Various Criterion Measures	183
38	A Comparison of Vineland Social Maturity Scale Scores With Bender-Visual Gestalt Test Scores	184

TABLE 2

CASE HISTORY

SUMMARY OF SOURCES OF INFORMATION

Number of Trainees	Mother	Father	Parents	Sister	Brother	School Records	Grandmother	Other Reports
33	17	5	8	1	1	4	1	7

STATEMENT OF PROBLEM - X

TABLE 3

REASON FOR REFERRAL - 1

Subject No.	Unemployment; inability to get steady job; unsuccessful employment	No job Training	Lack of basic skills	Low level of intellectual functioning	Burden in Home	Dependency	Lack of social, personal, and/or academic adjustment	Needed social adjustment or ccunseling
01	X					X	1	
02	X	1	X					
03		X	1					
04	X						1	
05	1	X						
06		1			X			
07	1		X		1			
08			1	X	1			
09	1			1				
10	1						1	
11	1						X	
12		1			X		X	
13			X					
14		1						
15					1			
16	X	1						
17	1							
18								
19	1	1	1			1		
20	Unknown							
21						X		
22							X	
23	1		1				X	
24			X		X			
25								
26								
27		X1						
28			X					1
29								X
30		X	X			1		
31								
32		X	1					
33	Mother doesn't understand him							

JOB EXPERIENCES

TABLE 4

Subject No.	No. of Jobs	Length of job experience Month	Week	Day	Full Time	Part Time	Types of Jobs	Reasons for Dismissal
01	21							
02						X	Mowed lawns, delivered handbills, washed windows, painter	
03						X	Janitor	
04	3	6	2				Dishwasher, bookbinding	Behavior
05	3	X (each)					Groundkeeper, janitor, autowash	Couldn't follow orders
06	24					X	Truck Loader	Couldn't get along with others
07	none							
08	no record							
09						X	Pressing in cleaners	
10						X	Shoveling snow	
11	5 + (records incomplete)				X	X	Assembly work, janitor, shoe repair	Unfounded complaints, not doing assigned work, doing work not assigned.
12						X	Dishwasher, gen'l helper	Loss of interest
13		X					Trapper, farm work	Committed to state hospital
14						X	Farm work, mowing	
15						X	Yard Work - M.S.D.	
16	none							
17	5 +				X		Lathe operator, metal worker, gen'l factory, kitchen helper	Personality problems
18								
19						X	Truck loader & unloader (when home from hospital)	
20	2				X		Goodwill Industries	
21	3 +					X	Gardener, wash cars, shoe repair	
22	3	5-6 24			X		Stock boy Janitor	Conflict with individual in charge
23	1					X	Caning chairs	
24	2	9			X	X	Greenhouse, upholstery	Couldn't produce
25	none							
26	none							
27	3	6 Yrs.			X	X	Assembled furniture, cake decorator, carpentry	Argument; po[illegible] working conditions

JOB EXPERIENCES (Cont.) TABLE 4 (Cont.)

Subject No.	No. of Jobs	Length of job experience Month	Week	Day	Full Time	Part Time	Types of Jobs	Reasons for Dismissal
28	2				X	X	Greenhouse, upholstery	Couldn't produce
29								
30	2					X	Sheltered workshop, neighborhood yardwork	
31						X	Kitchen work	
32	2						With father as plasterer, lawn work	
33	none						Helped mother do janitorial work	

SUMMARY:

8	Never held jobs
4	Janitorial
3	Greenhouse
8	Yard & lawn work
2	Farm
2	Loading
5	Furniture
4	Kitchen Work
2	Auto Wash
3	Housecleaning & Repairs
2	Shoe Repair
9	Other

DISMISSAL REASONS

3	Lack of production
1	Couldn't follow directions
2	Behavior
1	Peer relations
2	Employer relations
4	Other

CHILDHOOD HISTORY

TABLE 5

I. Birth

Subj. No.	Pre-Mature	Birth Injury	Pre-Natal Disease	Malformations	Wanted by one/both Parents	Unwanted by one/both Parents	BIRTH PROCESS	
							Normal	Complications
01						X	X	
02								X
03			Measles		X		X	
04					X			X
05							X	
06	X				X			
07		X						
08				large head		X	X	
09						X	X	
10	X				X			X
11	No information (abandoned by parents)							
12	X				X			
13								X
14						X	X	
15					X			
16					X		X	
17						X	X	
18	No information							
19	No information							
20	No information							
21	No information							
22			Measles	Blue Baby				
23	X					X		X
24		Broken collarbone; intracranial hemorrhage			(adopted)			Erythroblastosis - RH
25	No information							
26	No information							
27	X				X		X	
28				X	X		X	
29					X		X	
30					X			Breech
31	X					X		
32					X		X	
33					X		X	

CHILDHOOD HISTORY TABLE 6

II. Developmental History as Described by Informant

Subj. No.	Rate of learning			Ability to relate to adults		Ability to relate to peers		Happy		Toilet Trained	Age at which Walked	Slept well at Night
	Fast	Avg.	Slow	Good	Poor	Good	Poor	Yes	No			
01	X						X	X		18 Mo.	3 yr.	X
02		X		X		X		X		12 Mo.		
03	X			X		X		X		(Enuretic til 5) 16-17 Mo.	2½-3 Yr.	X-until 7 Epileptic
04	X				x		X	X		24 Mo.	12 Mo.	X
05	X (Home)		X (School)			X				30 Mo. (Enuretic til 14 Yr.)		
06			X			X			X	10 Mo. Re-trained at 2½ - ill.	3 Yr.	X
07			X				X	X		Lost when developed diabetes	12 mo.	X
08			X	X		X		X		18 Mos.	11 Mos.	X
09		X					X		X	42 Mos.	13 Mos.	X
10	X			X		X		X		12-15 Mo.	15 Mo.	X
11	No information											
				X		X		X		18 Mo.	3 Yr.	X
13		X						X		24 Mo.	12 Mo.	X
14	X			X		X		X		36-48 Mos.	3 Yrs.	X
15			X	X					X	18-24 Mo.		X
16	X				X	X		X		24 Mo.	14 Mo.	Light sleeper
17	X			X			X	X		24 Mo.	1 Yr.	X
18												
19	X			X			X	X		2 Yr.	11 Mo.	X
20	Unknown											
21			X									
22			X	X			X	X		48 Mo.	2 Yr.	Convulsions
23			X	X						18-24 Mo.	2 Yr.	X
24			X		X	X				5 Yr.	3 Yr.	X
25	No information											
26	Retarded											
27	X			X		X		X		4 Yr.	2½ Yr.	X
28			X			X			X		early	X
29	X									2 Yr.	1½ Yr.	X
30			X	X		X		X		18 Mos.	15 Mo.	no
31.		X		X		X		X		After 3 Yrs.	1 Yr.	X
32	X			X		X		X		2 Yr.	1 Yr.	X
33			X	X		X		X		2 Yr.	1 Yr.	X
AL:	12	4	14	16	2	16	8	19	4			

CHILDHOOD HISTORY

Table 7

III Diseases

Subj. No.	Allergies	Nervous Diseases	Head Injuries	Lost Consciousness	Convulsions	Accidents	Operations	Other
01	X						Tonsilectomy	Whooping cough, measles, mumps, pneumonia
02							Tonsil. & Adenoid.	Whooping cough, chicken pox, measles, mumps
03			Fall	Epilepsy	Eppilepsy		Tonsil. & Adenoid.	Pneumonia, rheumatic fever, alopecia areata from ringworm
04		X	Fall	X	X		Tonsilectomy	Hyperactivity, spinal meningitis, Measles
05							Adenoids	Headaches
06	X			X	X	Auto	Appendectomy	Nervous, Rt. temporal hemorrhage
07				X	X	Broke Leg		Possible moderate aphasia, diabetes
08				X	X			mumps, measles, whooping cough, susceptible to colds
09				X			Hernia	Diabetes
10			X	X				
11	No Information							
12	X		X			X	Tonsil. Spinal Tap	Sinus: dust allergy, pneumonia
13								High fever
14		X					Tonsil.	Spinal meningitis
15							Tonsil.& Adenoid.	Nervous stomach
16							Tonsil.& Adenoid.	Mumps, measles, whooping Cough
17								Pneumonia, Measles
18	Unknown							
19	Unknown							
20	Unknown							
21	Unknown							

CHILDHOOD HISTORY

Table 7 (Cont.)

III Diseases (Cont.)

Subj. No.	Allergies	Nervous Diseases	Head Injuries	Lost Consciousness	Convulsions	Accidents	Operations	Other
22							Tonsil. & Adenoids	
23								Measles, Chicken Pox
24	X				X		Appendectomy	
25	Unknown							
26	Unknown							
27	X				X		Tonsils	Measles, Chicken Pox Scarletina, running ear
28								Mumps, Measles
29			X			At 18 Mos. (thought to be cause of deafness)		Pneumonia, Mumps, Measles
30				X				Chicken Pox, Mumps
31							Tonsilectomy, appendectomy	Incipient Osteomyalitis of the hip, Chicken Pox, High fever
32	No information							
33	No information							
TOTALS:	5	2	5	8	7			

CHILDHOOD HISTORY

Table 8

IV. Other Children in Family

Subject No.	Brothers	Ages*	Sisters	Ages*
01	2	23, 25	2	31, 36
02	1	14	1	26
03	2	Unknown	3	12 to 27
04			1	17
05	1	21		
06	1	28		
07	3	23 mos., 23		
08			1	21
09	4(1 half)		4 (3 half)	
10	3	8,8,9	1	11
11	Unknown			
12	3	11,21,24		
13	1		2	(Parents raised 13 state children)
14	1	25	2	17,21
15	1	16 (deaf)	1	15
16	2	27,30		
17	2	41,47	2	45,49
18	Unknown			
19	3	7,8,10	4	2,3,5,11
[illegible]0	Unknown			
21	Unknown			
22	2	25 (deceased) 35	3	37,39,41
23	2	29,35		
24	1	32	2	37,35
25	1		2	
26	1		1	16
27	2	34,32		
28	1	36	1	34
29	5	3,4,7,15,17	1	5
30	2	22,15	3	18,17,12
31			1	23
32	8 (3 half)	23,21,17,13, 11,7,6,4	4 (all half)	10,10,3,1
33			3	26,24,23

24 w/brothers　　22 w/sisters

Total blood brothers	46	Total blood sisters	37
Mean blood brothers	1.916	Mean blood sisters	1.76
Total half brothers	4	Total half sisters	7
Mean half brothers	2	Mean half sisters	3.5

12 men w/half brothers　　2 men w/half sisters

* Ages at time of subject's admittance to program

CHILDHOOD HISTORY

Table 9

V. Parents

Trainee No.	Marital Problems	Present Marital Problems	Broken Home	Remar-ried	One Parent Deceased	Father's Occupation - Child was Small	Present Occupation
01	X					Insurance	Insurance
02	X	X				Factory Worker - Ford	
03	X	X				Truck Driver-Dairy	Home (handicapped)
04	X	X				Auto Industry	Auto Industry
05	X	X				Sheet metal worker	Sheet metal worker
06	X		X	X		Odd jobs	
07	X	X				Laborer	Laborer
08						Chief Petty Officer Royal Navy, England	Orderly at J.L. Hudson's
09	X	X	X	X	X	Farmer	Budd Wheel
10	X	X				Chief Petty Officer U.S. Navy	Carpenter's Helper
11	Abandoned by parents. Grandfather cared for him.						
12					Father	Body repair	
13						Farming	Ill
14						Packard Motors	Plant Protection
15	X	X				Shop work	Unskilled at Fisher Body
16						Laborer in iron Co.	Retired
17			X			Owned pool hall & lunch counter	Retired farmer
18	No information						
19			X	X		Mechanic (stepfather)	Truck Driver (stepfather)
20	Unknown (Lapeer State Home)						
21	Unknown						
22	X		X(deceased)		Father	Machinist	
23						Machinist, tool lathe operator	Retired
24	X		X		X	Navy surgeon	
25				X		Unskilled labor	Chrysler
26	X	X	X	X	X	Unknown	
27						Laborer - Ford	Retired
28					Mother		Retired

CHILDHOOD HISTORY (Cont.)

Table 9

V. Parents

Trainee No.	Marital Problems	Present Marital Problems	Broken Home	Remar-ried	One Parent Deceased	Father's Occupation - Child was small	Present Occupation
29	X	X				G.M. line	Same
30						Army	Painter
31						Physician	Same
32	X	X	X	X		Construction	Unemployed
33	X	X				Sanitation	Unemployed
Totals	16	12	8	6	6		

Unskilled............	12
Semi-skilled.........	7
Unknown or unemployed........	5
Armed services.......	3
Retired..............	4
Farmer...............	2
Handicapped..........	2
Office...............	2
Professional.........	2

CHILDHOOD HISTORY
V. Parents (Cont.)

Table 10

Trainee No.	Mother worked outside before pregnancy	Occupation at that time	Mother worked after child's birth	Length of time worked after birth	occupation	Child cared for by
1	no		no			
2			X	part-time	store clerk	
3			X	Since father's accid.	Domestic-Pract. Nurse	
4	no		no			
5			X	summers	Cafeteria Mgr.	
6			X		Insp.-Production	Mother & Grand mother
7	X	Store Clrk.				
8	X	War Factory				
9	no		no			
10	X	Running Drill Press				
11	No information - cared for by stepgrandfather					
12	no		no			
13	X	Farm	X		Farm	Parents
14			X	4-5 Yrs.	Prac. Nurse	Children old enough
15			X	4½ Yrs.	Selling	Parents
16	no		no			
17	no		no			
18	No information					
19	X	in school	X (Grandmother)	While lived with her	Cook	Great Grd. mother
20	Unknown - in Lapeer State Home					
21	Unknown					
22	no		X	to maintain family	Prac. Nurse Hse. work	Mother
23	no		no			
24	no		no			
25	no		no			
26	on welfare		on welfare			Mother
27			X		Clerk	Brother(older)
28			X		Cleaning	
29	no		no			
30	X	Personnel	no			
31	no		no			
32	Unknown					
33			X		Janitorial	

Mothers:

(Before Child Born)		(After Child Born)	
Unskilled	2	Unskilled	6
semiskilled	1	Semiskilled	2
Farm	1	Farm	1
School	1	School	0
Welfare	1	Welfare	1
Managerial (Personnel)	1		

Table 11

CHILDHOOD HISTORY
VI. Interaction of Parent & Child

Trainee No.	Strict Mother-Permissive Father	Strict Father-Permissive Mother	Both Strict	Both Permissive	Rejected By Mother	Rejected by Father	Overprotected by Father	Overprotected by Mother
01			X		X	X		
02		X				X		
03		X					X	X
04							X	X
05					X	X		X
06				X				
07		X						
08				X				X
09		X						X
10		X						X
11	Abandoned by parents - Lived with step-grandfather							
12				X			X	X
13		X						X
14				X			X	X
15	X						X	
16				X			X	X
17		X						
18	No information							
19				X				X
20	Institutionalized							
21						X		
22							X	X
23		X						X
24	Institutionalized							
25	X							
26	No father at home							Neurotic - dependent
27			X (accepting)					
28			X					
29			X					
30		X						
31	X				X			X
32				X				
33		X						X
Totals	3	10	4	7	3	4	7	16

CHILDHOOD HISTORY

Table 12

VII. Parents' Adjustment to Handicap

Trainee No.	Attitude Toward Disability Mother	Attitude Toward Disability Father	Attitude Toward Child Mother	Attitude Toward Child Father
01	Acceptance (knows must accept - would like to blame someone)	Acceptance	Resentment Impatience	Resentment Impatience
02	Ambivalence	Assumed all guilt	Acceptance	
03	Guilt			Gave much attention
04	Acceptance with guilt, yet blames others for present social condition.	Acceptance (same)	Resentment Regret	(same)
05	Resigned to fact		Some guilt	Rejection
06	Regretful		Loved him	
07	Acceptance		Ambivalent	Ignored
08	Didn't understand why child deaf - forced to accept. Blamed no one	Didn't understand why child deaf. Bitter	Overly compassionate	(Same)
09	An act of God		Protection	Neglect
10	Felt sorry. Deeply depressed at times.	(Same)	Extremely punitive. Acceptance-Protection	Acceptance - punitive
11	No information			
12	Very upset (possible guilt involvement	"Ripped heart out"	Overprotective - resented people if anything said	No evidence
13	Regretful	Regretful		
14	"It was meant to be"	(Same)	Pity with a feeling of closeness	Pity and felt closer
15	Acceptance	Didn't know--quiet-withdrawn	Loved child more--child rejected mother	
16	Felt bad - not a shameful thing	(Same)	Was more of a baby in the home	(Same)
17	Felt sorry	No blame or guilt	Yearned for the child	No special dislike
18	No information			
19	Acceptance	(Same)	At times-rejecting	Confidence in boy's ability - possibly abusive
20	No information			
21	No information			
22	Without guilt - a cross to bear	Never really knew child	Very protective	
23	Regretful but must accept	(Same)	Regretful	(Same)
24	No information - institutionalized			

CHILDHOOD HISTORY

VII. Parents' Adjustment to Handicap (Cont.)

Trainee No.	Attitude Toward Disability		Attitude Toward Child	
	Mother	Father	Mother	Father
25	No information			
26	Unconcerned	--	--	--
27	Very accepting	(Same)	Deep Sorrow	(Same)
28	An act of God	Guilt-his fault	Gave much affection	Gave much affection--because of the way he was
29	Needed attention, help in understanding, blamed mother-in-law, bore grudge	Needed attention	Needs more time, maybe someday will be helped	Not known
30	"The deaf are the loneliest people in the world."	In spite of deafness boy should stand on own two feet.	Overprotection & love	Realistic
31	Acceptance	Rejected handicap	Rejection but over-protection, sympathy	Religious-wanted to help, accepted generally
32	Lack of concern	(Same)	Loving, but no positive steps to aid or encourage	
33	Deep guilt	Blamed mother	Regretful	(Same)

Table 13

CHILDHOOD HISTORY
VIIa. Parents' Adjustment to Handicap
(Supplemental Classification)

Trainee No.	Rejection		Overprotection		Accept	Resent	Hostile	Over-Punitive	Guilt	Sorry	Pity	Ambivalent
	Mother	Father	Mother	Father								
01	X	X			X	X						
02		X			X							
03			X	X					X			
04			X	X	X	X						
05	X	X		X					X			
06			X	X								
07		X	X									X
08					X		X					
09			X									
10			X		X			X				
11	Abandoned by parents											
12			X						X			
13			X							X		
14			X	X							X	
15		X		X	X		X					
16			X	X						X		
17										X		
18	No information											
19	No information											
20	(State institution)											
21		X				X						
22			X	X	X							
23			X							X		
24	(State institution)											
25		X							X			
26												(Unconcerned)
27					X					X		
28					X				X			
29	(Bears grudge toward mother-in-law)											
30			X		X					X(father)		
31	X		X	X								(Unrealistic)
32					X							(unconcerned)
33	(Difficult - didn't understand)											
Totals	3	7	14	9	11	3	2	1	5	6	1	1

CHILDHOOD HISTORY

Table 14

VIII. Child's Adjustment to Handicap

Trainee No.	Accepted Handicap	Withdrawal	Self-centered	Demanding	Resentful	Unhappy	Denial of Handicap	Lacked Understanding	Belligerent	Hot Tempered or Temper Tantrums	Angry	Moody	Hyper-active	Restless or Nervous	Other
01		X									X				
02	X														
03										X				X	
04			X		X								X		
05						X	X					X			
06								X						X	
07															X*
08									X	X					
09	X									X					
10										X					
11	No Information														
12			X	X											
13					X					X					
14	No Information														
15										X		X			
16	No Information														
17	No Information														
18	No Information														
19	No Information														
20	Unknown														
21	Unknown														
22										X					
23		X													
241										X					
25	No Information														
26	No Information														
27										X					
28						X				X					
29						X				X					
30															
31	X									X(Not Extreme)			X		
32	No Information														
33										X					
Total	[illegible]	2	2	2	1	3	1	1	1	13	1	2	2	2	1

*Unusual affectional response tendencies toward mother

CHILDHOOD HISTORY

IX. Personality Traits (1)

Table 15

Trainee No.	Nail Biter	Thumb Sucker	Enuretic	Diau-retic	Cried Easily	Showed no Emotion	Fears	Persistent Nightmares	Compulsive Behavior	Unusual Habits
01						X	Dark room sleeping			Difficulty of expression; loss of words
02			Until 5		X					Daydreaming
03		X						Due to Epilepsy		Before getting job just sat, stared out of window
04			Until 2			X				
05	Some		Until 14			X				
06	X					X	For Mother & her conduct	X		Forgets easily
07			After 5			X	Being hurt by others			
08							Thunder & Lightening			
09			Until 6		X	Tried to show none				Worked in gardens
10					X	Held in negative feelings	None!			Moved fast
11	No Information									
12										Egocentric, demanded attention
13			Until 2	X						
14						X			Rocked on bed at night	Scratches self when excited
15						X				Lazy; doesn't like people who drum on table
16	X					At times	Of unknown	At Times		Discomfort in muscles of arms, shoulders
17						X	Spiders			Stayed up all night, Slept days
18) 19) 20) 21)	NO INFORMATION									

CHILDHOOD HISTORY

Table 15

CE
IX. Personality Traits (1) (Cont.)

Trainee No.	Nail biter	Thumb sucker	Enuretic	Diauretic	Cried easily	Showed no emotion	fears	Persistent nightmares	Compulsive behavior	Unusual behavior
22							Height			
23		X			X	Used to	Dark		Rocking of Head	
24					X		Of spending life at Lapeer			
25			X							
26							World in General			
27			X		X		Thunder & darkness	X		
28		X	X		X	X				
29	X		X			X				
30	X				X			X		
31	X						Being away from family			Excessive sleep
32	No Information									
33						X				

CHILDHOOD HISTORY

Table 16

IX. Personality Traits (2) (Cont.)

Trainee No.	Disciplinary		Problems in Sex Adjustment	Extreme Interest in Male Sex	Extreme Interest in Female Sex	Observed Sex Behavior	Involved with Juvenile Authorities or Other
	School	Home					
23		Seldom				X	
24							
25	X	X		X	X	?	Indecent liberties, incest, homosexuality
26			X	X		X	Larceny, 1963 - Accosting, 1961
27							
28	X		Naive			Peeping Tom	
29	X						Fighting, Stealing
30							
31	X	X					
32							
33	X						Window Peeping

CHILDHOOD HISTORY

Table 16

IX. Personality Traits (2)

Trainee No.	Disciplinary		Problems in Sex Adjustment	Extreme Interest in Male Sex	Extreme Interest in Female Sex	Observed Sex Behavior	Involved with Juvenile Authorities or Other
	School	Home					
01							Jail-for trouble where employed
02	For a time						
03	X	X	Naive				
04	X	X					
05						X	
06	X		X				
07	Acute problem		Unusual interest			X	
08							
09							
10	X	Only when bored				unofficial	
11	No Information						
12	X	Resisted some ideas					Trouble at Flint school
13	Once jumped freight for Ohio		Hated girls				Charged with assault with intent to commit murder - 20 Yrs. Ionia State Hospital
14							
15	Not at first	Beat up on both parents	Excessive masturbation				Jail for fighting with father
16							
17		Ran away					
18	No Information						
19							At 14 yrs. picked up with group of boys, held overnight in jail
20	No Information						
21	No Information						
22	X (M.S.D.)				Before marriage		

CHILDHOOD HISTORY Table 17
Personality Traits (3)

Behavioral Problems (Peer Group Relations)

Trainee No.	Difficulty - Other Children	School Problems	Difficulty- Brothers & Sisters	Imitation - who, how	Conflict in seeking parental attention
01	Rejected; curiosity toward others		Rivalry, envy		
02		Some			
03	Little		None	Members of family	
04	Picked on, avoided by	X		Father	
05					
06		Fought, ran away		Older Brother	
07		X			
08					
09	In home		X		X
10	M.S.D.			Father	
11	No Information				
12	M.S.D.	Disci-pline	Jealous of younger Bro.	Older Brother	
13	X				X
14					
15	Didn't make friends with other children	Resented authority	Jealous		
16					
17	Slapped; picked on by others			Younger Sister	
18	No Information				
19				Independent, did things saw others do	
20					
21	No Information				
22	Hearing Children	Slow Learner Temper Outbursts			
23	Couldn't make friends		Resisted Brother's Authority		
24	No Information				
25					
26) 27)	No Information				
28	Few Friends				
29	Picked on by other child.				
30) 31) 32)	No Information				
33	Withdrawn				

Table 18

CHILDHOOD HISTORY
Personality Traits (4)

Behavioral Problems

Trainee	Child shy and Withdrawn	Extreme Amount of Daydreaming	Cruel to: Animals	Brothers	Sisters	Others	Aggressive	Easily provoked into fights	Explanation
01	X	X					X	X	
02									
03									
04		X					X		Unable to understand others
05									
06		X					X	X	
07	X	X							
08							X	X	
09	X	X	X						
10		X		Tease					
11	No Information								
12				X			X	X	Didn't like school
13	Withdrawn, not shy with older people								
14	X								
15	X	Stared					X	X	
16	With strangers								
17	Somewhat	X						X	
18	No Information						X	X	
19							X	X	If struck, strike back
20) 21)	No Information								
22	Away from Home	X							
23	X	X							
24									Extremely angry when used by others - taken advantage of
25							X	X	When cheated
26) 27) 28)	No Information								
29							X	X	When teased
30) 31) 32)	No Information								
33	X	X	X						

Table 19

ADULT HISTORY

I. Environment, Home & Social Status

Trainee No.	Lived With	Yrs. in Permanent Residence	Inter-action in Home	Involved with Law since 19 Yrs. old.	Arrests & Reasons	Sentenced-Jail or Prison	Where & When Sentenced
01	Parents		Stormy	X		X	
02	Parents	Life					
03	Parents	Life	Good				
04			Good				
05	Parents	2 Yrs.					
06	Mother & Grandmother	Life	Good				
07	Parents	Life					
08							
09	Mother & Stepfather-	Life	Adequate				
10	Parents	Life	Good	X		X	
11	No Information						
12	Parents	1 Yr.		X			
13	Camp Gibbs-	1 Yr.	Good	X	Assault-Intent to commit murder		20 Yrs. Ionia State Hospital
14	Parents	Life	Good	X			
15	Parents	Life	Not good				
16	Mother & Brother	Life	Good	X			
17	Mother	3-4Yrs.	Good	X	Drinking	X	Los Angeles, Owosso, Detroit
18	No Information						
19	Mother	3 Yrs.	Good	X			
20	Lapeer						
21	Parents						
22	Wife & Children	4½ Yrs.	Good	X	Disturbing the Peace	X	
23	Parents	Life	Good	X			
24	Lapeer	11 Yrs.	Good				
25	Parents	14		X	Indecent Liberties		
26	Mother			X	Larceny (17 Yrs. old)		Ionia Reformatory
27	Parents	33	Very Good				
28	Father	31	Good				
29	Mother	18	Good	Since 15			
30							
31	Parents	2	Not good, reason for referral				
32	Parents	18	Very well				

DELINQUENCY QUOTIENT

Table 20

	Personal					Home			
Trainee No.	Mental or Attempted Suicide	Drink	Sex Adjustment	Peer Relationships	Aggression	Poor Background	Strained Home Relations	Problem at Home	Running Away
01	X		X	X				X	
02								X	
03			X				X	X	
04	X		X				X	X	
05		X	X					X	
06			X		X				X
07			X					X	
08	X		X						
09			X						
10			X					X	
11	No Information								
12	X		X						
13								X	
14			X					X	
15			X				X	X	
16			X					X	
17		X	X						X
18	No Information								
19	X		X					X	
20			X						
21			X						
22			X				X		
23			X	X					
24	No Information								
25			X					X	X
26			X			X			X
27									
28			X		X				
29			X		X	X	X		
30			X						
31			X				X		
32							X		
33			X				X		
TOTALS	5	2	26	2	3	2	8	13	4

DELINQUENCY QUOTIENT (Cont.) Table 20

Trainee No.	COMMUNITY				SCHOOL			Caused Problems at Center Behavior-wise
	Employer Relation-ships	Sex Offense	Theft	Other	Dismissed: Behavior	Lack of Progress	Disciplinary or Lack of Adjustment	
01	X	X				X	X	X
02						X	X	
03					X			
04	X							
05							X	X
06							X	X
07				X				X
08								X
09				X				
10			X		X			X
11								X
12			X	X	X			X
13				X				
14							X	
15				X	X	X		
16							X	
17		X						X
18	No Information							
19				X			X	X
20								
21								
22	X			X			X	X
23				X		X		X
24	No Information							
25					X	X		X
26		X	X					X
27								
28					X	X		
29			X	X	X	X		
30								
31								
32						X		
33		X					X	X
TOTALS	3	4	4	9	7	8	9	15

ADULT HISTORY

Table 21

Additional Psychological and Physical Handicaps

Trainee No.	Emotionally Disturbed, Psychiatric or Personality Problems	Visual Impair-ment	Diabetes	Deform-ity	Brain Damage	Muscle or Motor	Educ. or Mental Retard.	Epilepsy	Other
01	X			X					
02		X				X			
03		X						Controlled	Possible Microcephalic
04				X					
05									Possible Alcoholism, orthopedic problem
06					X (possible)	X			
07	X								Aphasoic (Physical immaturity)
08					X				
09			X				X		
10	X								
11	X		X		X				
12	X								
13									Amputation of Rt. little Finger
14	X								
15	X								Overweight
16		X							
17	X	X				X			
18		X					X		
19	X						X		
20							X		
21	X			X		X	X		
22	X	X							
23	X	X		X					
24						X			
25	X	X							
26	X	X			X (Suspected)	X			

ADULT HISTORY

Table 21

Additional Psychological and Physical Handicaps (Cont.)

Trainee No.	Emotionally Disturbed, Psychiatric or Personality Problems	Visual Impairment	Diabetes	Deformity	Brain Damage	Muscle or Motor	Educ. or Mental Retard	Epilepsy	Other
27		X							
28	X	X							Underdeveloped skull
29	X								
30		X							Physical immaturity
31	X	X							Physical immaturity
32		X							
33	X	X							
TOTALS	18	15	2	4	4	5	6	1	1 slight microcephalic 2 physical immaturity

Table 22

SUMMARY OF TRAINEES FAMILY (COLLATERAL) MEDICAL HISTORY

Convulsions	Hearing-Deaf Problems	Heart Problems	Stroke	Cancer	Diabetic	CNS	Mental Illness
1	9	10	1	10	7	4	2

Bronchial or TB	Other
3	3

Table 23

SUMMARY OF RELIGIOUS AFFILIATIONS OF TRAINEE AND FAMILY

Protestant	Catholic	None	Not Listed	Other
21	6	3	1	1

CHILDHOOD HISTORY

Table 24

X. Educational History

Trainee No.	Pre-Kinder-garten	Kinder-garten	Day School	Out of State Residential School	Special School	Mich. School for Deaf	Total Years Schooled
01			7		1	3	11
02			13				13
03			5			6	11
04			5			6	11
05						12	12
06						12	12
07					9		9
08			1	12½			13½
09				12½			12½
10			5			3	8
11			1½			12½	14
12			13			3	16
13						10	10
14						13	13
15						12½	12½
16			15		½		15½
17						12	12
18							0*
19			12				12
20							0**
21				9			9
22			1			11	12
23			1			12	13
24			5		15***	2	22
25			8				8
26			4				4
27		1	12				13
28			½		1½	12	14
29			3		5		8
30			8				8
31	1			5	5	5	15
32	1			8	3		12
33						8	8

* Result of seclusion; no formal education

** Institutionalized for 25 years

*** Institutionalized for 15 years

TABLE 25

SUMMARY

Trainee Age at Onset
and
Etiology of Hearing Disability

Age Deafness Occurred or Was Discovered	N
Birth	14
10 to 14 months	5
15 to 18 months	4
24 to 30 months	6
36 months	2
5 years	1
8 years	1
	33

Etiology*	N
Scarlet Fever	1
Congenital/Hereditary	12
Rubella (mother)	3
Birth injury	3
Encephalitis	2
Rt.Temporal Hemo.+ Encephalitis	1
Disease with prolonged high fever	1
Measles	1
Spinal Meningitis	1
Mumps	1
Lues (effects of maternal syphilis)	1
Early childhood accidents	1
Unknown	5
	33

*Causes reported by parents or family physician.

TABLE 26

DEMOGRAPHIC DATA ON TRAINEES

Case #	City in Michigan	Type of Community
01	Muskegon	Urban
02	Dearborn	Suburban
03	Garden City	Suburban
04	Lansing	Urban
05	Dearborn	Suburban
06	Muskegon	Urban
07	Detroit	Urban
08	Dearborn	Suburban
09	Detroit	Urban
10	Saginaw	Urban
11	Flint	Urban
12	Conway	Rural
13	Negaunee	Rural
14	Armada	Rural
15	Muir	Rural
16	Detroit	Urban
17	Owosso	Suburban
18	Muskegon	Urban
19	Detroit	Urban
20	Lapeer	Urban
21	Cadillac	Urban
22	Mt. Pleasant	Urban
23	Detroit	Urban
24	Indian Riber	Urban
25	Highland Park	Suburban
26	Jackson	Urban
27	Kingsford	Suburban
28	Bay City	Suburban
29	Saginaw	Urban
30	Grand Rapids	Urban
31	Traverse City	Urban
32	Jackson	Urban
33	Grand Ledge	Suburban

TABLE 27

SUMMARY OF PHYSICIANS' REPORTS

TRAINEE MEDICAL EXAMINATIONS

I. Infections	F
Measles	24
Scarlet Fever	4
Diphtheria	
Mumps	15
Influenza	8
Pneumonia	6
Pleurisy	1
Rheumatic Fever	1
Encephalitis	1
Chicken Pox	1
Meningitis	1
Tonsilitis	1

II. Allergy	F
Hay Fever	1
Asthma	1
Asthma	1
Idiosyncrasies	1
Drugs or medications	1

III. Injuries	F
Fractured 3rd Metacarpal	1
Knee cut (rt)	1
Fractured Knee (rt)	1
1st Finger gauged	1
Fractured Knee Cap	1
Severe head injury	1
Dislocated right elbow	1

IV. Operations	F
None	15
T & A	5
Adenoidectomy	1
Appendectomy	3
Hernioplasty	1
Tonsilectomy	4
Exploratory exam -inner ear inoperable	

V. Cardiorespiratory	F
Cough	4
Asthma	1
Constant expectoration	2
Chest pain (complaint)	2
Bronchitis	1

VI. Ears	F
Deafness	30
Ear discharge	2
Tennitis (reported)	1
Vertigo	1

VII. Eyes

Corrected Vision	F	Corrected Vision	F
20/15	1	20/15	1
20/20	19	20/20	18
20/25	1	20/25	1
20/30	3	20/30	4
20/50	2	20/50	1
		Blind	1

VIII. Pulse & Blood Pressure

Pulse	F	Blood Pressure	F
96	1	150/96	1
92	1	140/90	1
86	1	132/80	1
84	1	130/80	1
80	4	128/88	1
78	1	128/76	2
76	3	125/10	1
74	2	124/72	1
72	7	120/80	4
70	3	120/70	3
68	1	120/60	1
64	1	116/70	1
	26	115/70	1
		112/76	1
		112/70	1
		110/70	1
		110/66	1
		108/70	1
		104/58	1
		100/60	1
			26

TABLE 27 Cont.

TRAINEE MEDICAL EXAMINATIONS

IX. Height & Weight

Height Inches	F	Weight Pounts	F
73	1	233	1
70	8	177	1
69	2	174	1
68	7	166	1
67	4	164	1
66	1	163	1
65	3	162	1
64	1	160	1
63	2	155	1
	29	151	1
		150	1
		147	1
		145	1
		139	1
		138	3
		130	1
		128	1
		126	1
		125	1
		118	1
		113	1
		110	1
		109	1
		107	1
		93	1
		92	1
			28

X. Urinary	F
Burning	1

VI. Extremities (problems)	F
Feet	2
Fingers & Digits missing	1

XII. Gastrointestinal (problems)	F
Nausea (chronic)	1
Pain	1
Gas	1
Constipation	2
Diarrhea	1
Hemorrhoids	1

XIII. Teeth	F
Abscesses	12

XIX. Family History of Disease	F
TB	1
Diabetes (+)	5
Cancer	2
Goiter	1
Nervous or Mental Illness	5
Brights	1
Rheumatism	1
Encephalitis	1
Overweight	3
Epilepsy	3

TABLE 28

AUDIOLOGY

Decibel Losses in Ranges

Project Trainees

Case No.		125	250	500	1000	2000	4000	8000
01	(L)	35	50	70	100	100	100	NR
	(R)	30	40	55	95	95	100	NR
02	(L)	55	65	80	NR	NR	NR	NR
	(R)	60	65	80	95	NR	NR	NR
03	(L)	55	50	60	70	85	NR	NR
	(R)	NR*	NR	85	90	NR	NR	NR
04	(L)	NR	75	90	95	NR	NR	NR
	(R)	65	75	90	95	NR	NR	NR
05	(L)	60	60	70	90	85	95	NR
	(R)	NR	65	70	100	NR	NR	NR
06	(L)	NR	80	80	90	NR	NR	NR
	(R)	NR	NR	NR	NR	NR	NR	NR
07	(L)	NR	NR	75	70	60	65	40
	(R)	NR	70	70	70	60	65	55
08	(L)	NR	NR	100	NR	NR	NR	NR
	(R)	NR	NR	NR	NR	NR	100	NR
09	(L)	55	55	55	55	50	50	55
	(R)	NR	NR	90	95	100	NR	NR
10	(L)	NR	NR	NR	NR	NR	NR	NR
	(R)	NR	75	85	NR	NR	NR	NR
11	(L)	65	75	NR	NR	NR	NR	NR
	(R)	55	70	NR	NR	NR	NR	NR
12	(L)	55	55	75	NR	NR	NR	NR
	(R)	60	60	75	95	NR	NR	NR
13	(L)	NR	NR	85	90	NR	NR	NR
	(R)	NR	NR	85	100	90	NR	NR
14	(L)	60	60	75	90	NR	NR	NR
	(R)	NR	70	80	85	85	NR	NR

TABLE 28 cont'd

Decibel Losses in Ranges
(cont'd)

Case No.		125	350	500	1000	2000	4000	8000
15	(L)	55	65	90	95	NR	NR	NR
	(R)	55	65	80	95	100	NR	NR
16	(L)	NR	80	95	95	100	NR	NR
	(R)	60	75	85	95	100	NR	NR
17	(L)	NR	70	85	NR	NR	NR	NR
	(R)	NR	NR	95	NR	NR	NR	NR
18	(L)	--	--	65	75	80	--	--
	(R)	--	--	NR	NR	NR	--	--
19	(L)	60	55	70	90	NR	NR	NR
	(R)	60	55	75	90	NR	NR	NR
20	(L)	50	75	85	95	95	NR	NR
	(R)	55	NR	85	100	NR	NR	NR
21	(L)	NR	NR	90	NR	NR	NR	NR
	(R)	NR	NR	95	NR	NR	NR	NR
22+	(L)	--	--	--	--	--	--	--
	(R)	--	--	--	--	--	--	--
23	(L)	60	60	75	100	100	100	--
	(R)	NR	70	85	100	95	100	--
24	(L)	--	--	50	65	100	--	--
	(R)	--	--	55	80	75	--	--
25	(L)	60	40	50	80	95	95	80
	(R)	45	35	50	80	--	90	80
26	(L)	60	70	75	95	90	NR	NR
	(R)	60	60	75	90	90	NR	NR
27	(L)	NR	NR	95	NR	NR	NR	NR
	(R)	NR	NR	NR	NR	NR	NR	NR
28	(L)	NR	80	95	95	NR	NR	NR
	(R)	NR	NR	90	NR	NR	NR	NR
29	(L)	60	60	80	100	NR	NR	NR
	(R)	NR	60	85	90	75	NR	NR
30	(L)	NR	70	85	95	NR	NR	NR
	(R)	50	65	75	75	65	60	75
31	(L)	NR	75	90	95	100	NR	NR
	(R)	NR	70	95	90	85	NR	NR

TABLE 28 cont'd

Decibel Losses in Ranges
(cont'd)

Case No.		125	250	500	1000	2000	4000	8000
32	(L)	65	55	60	80	70	65	60
	(R)	45	55	55	60	70	55	60
33	(L)	NR	75	85	80	85	85	65
	(R)	60	60	65	80	95	100	NR

* When no responses were elicited, NR was assigned to that Frequency.

+ Not in project long enough to be tested.

TABLE 29

AVERAGE SPEECH RANGE LOSS IN DECIBELS

Case No.	Right	Left
01	82	90
02	92	93
03	92	72
04	95	95
05	90	82
06	100	90
07	66	68
08	100	100
09	95	53
10	95	100
11	100	100
12	90	92
13	92	92
14	83	88
15	92	95
16	93	97
17	98	95
18	--	--
19	88	87
20	95	92
21	98	97
22	--	--
23	93	92
24	--	--
25	?	75
26	85	87
27	--	98
28	97	06
29	83	93
30	72	93
31	90	95
32	62	70
33	80	83

Average speech range loss was established by averaging the air conduction threshhold for pure tones of 500, 1000, and 2000 CPS. When no response NR was elicited, 100 d.b. was assigned to that frequency.

HOURS SPENT ON EACH TRAINING ACTIVITY

Table 30

Trainee No.	Total No. of Training Days	Arith.	Audio.	Civics	Counseling Diag.	Community Contacts	Current Events	Driver Ed.	Econ.	Geog. (Travel Factors)	Communication
1	410	135	45	0	75	110	115	0	0	0	135
2	702	334	51	111	14	125	250	48	60	60	334
3	625	307	14	42	65	128	300	25	50	50	307
4	393	191	40	61	15	80	175	--	30	31	191
5	324	157½	30	52	25	60	85	--	20	22	157½
6	426	210	40	72	30	90	210	--	50	50	210
7	100	42	5	10½	46	28	35	--	10½	10½	42
8	897	412	40	50	30	160	325	70	--	50	412
9	225	102	5	25½	19	68	85	--	25½	25½	102
10	235	177	25	88	65	80	150	31	44	44	177
11	584	129	12	--	187	76	79	--	15	--	129
12	601	154	16	40	147	72	94	31	39	39	153
13	446	112½	--	--	25	60	96	8	58	--	112½
14	524	221	--	82	35	100	221	41	40	42	221
15	497	205	--	80	20	96	204	39	36	44	204
16	309	102	18	51	60	60	102	51	25	26	102
17	74	27½	--	--	37	16	27½	--	13	--	27½
18	347	120	10	--	110	50	40	--	--	32	120
19	646	318	50	60	50	140	160	79	--	106	318
20	331	161	25	66	225	70	40	43	--	54	161
21	469	110½	15	42½	35	50	75	--	30	12½	110½
22	86	32½	--	16	25	20	32½	16	12	4	32½
23	386	195	20	65	45	80	90	49	35	30	195
24	232	120	40	40	30	50	75	--	30	10	120
25	400	175	30	46	40	80	160	51	26	26	175
26	367	180	30	60	30	80	100	42	--	60	180
27	341	173	50	48	15	60	125	--	28	22	173
28	320	100	10	16½	47	75	100	50	--	16½	100
29	225	75	30	40	42	56½	75	40	--	20	75
30	219	72½	30	35½	37	50	72½	29	--	35½	72½
31	184	57½	15	15½	37	35	57½	30	15½	--	57½
32	119	49½	5	6½	30	22½	37½	18½	--	6½	49½
33	106	33	10	5½	28	26	32	16	--	5½	33
Sum X	12150	4994	711	1266	1421	2355	3828	808	694	938	4993
Sum X^2		1025728	23921	77136	102315	206253	637438	37188	26318	44366	1025421
Mean	368.2	15133.33	23.70	39.56	43.06	71.06	116.0	33.67	25.70	30.26	151.30
S.D.	90	90	15	29	35	34	76	21	18	23	90

SHOP REPORT SUMMARIES ON PROJECT TRAINEES

Table 31

Key:
1 - Excellent
2 - Good
3 - Fair
4 - Unsatisfactory

Trainee No.	Learning Capacity	Work Tolerance	Production	Attendance	Punctuality	Judgement	Dependability	Frustration Tolerance	Appearance
02	2	1	2	1	1	1	1	1	1
03	3	3	3	1	1	2	2	4	3
08		4						4	
10	3	3	3	3	4	2	3	4	3
11	2	3	4	2	4	3	4	4	3
12	3	4	4	4	4	4	4	4	4
13	3	3	3	1	1	2	2	1	2
14			4						4
15			3					3	
16	3	2	2	1	1	2	2	2	1
18			4						
19		4	4					4	
20		2	3						
21			4						
22		4	3						
23			3					4	

Trainee No.	Knowledge of Equipment, Safety, Shop Policies H & R	Working Knowledge	Unusual Behavior or Mannerisms (Comments)
02	3	2	Difficulty in learning & perceiving due to poor vision
03	4	3	Slow learner, short tempered, can't follow instructions
08	4	3	Immature socially & toward work, anxious, short atten. sp.
10	3	3	Inconsiderate, closed to new work or ideas, complains
11	3	3	Moody, much depends on his attitude
12	4	4	Overly friendly, apologetic, offensive, erratic behavior
13	2	2	Very slow in reading & working. Rarely voices opinions
14	4	4	Immature, lacks motivation
15			Lacks motivation, tendency to withdraw
16	3	2	Judgement & dependability deBend on area & degree of Comprehen.
18			Blindness in one eye, sense of humor, lack of retention
19			Severe lack of communication skills. Can't get along with others
20			Very eager, but lacks reading and drawing ability
21			Easily distracted from work, lacks motivation
22			Can't accept own limitations, lacks motivation, low in cooperation
23			Slow but tries, can't carry out instructions

Table 32

HOKE AND RETHERFORD TOOL TEST SCORES OF PROJECT TRAINEES

Trainee No.	Original Scores			Retest Scores			Time Between Test - Retest
	Part I	Part II	Part III	Part I	Part II	Part III	
01	56	63	57				
02	42	47	62	46	48	58	12 months
03	23	29	59	37	45	60	12 "
04	51	55	59				
05	34	41	56				
06	41	53	56				
07	18	16					
08	16	19	36	29	19	36	13
09	36	31	20	28	25	51	16
10	34	41	51	55	59	60	16
11	37	57	53	45	62	61	12
12	37	34	42	42	52	58	16
13	57	64	58				
14	34	31	40	38	32	58	16
15	34	37	58	33	51	54	9
16	26	33	49				
17	49	61	53				
18			25				
19			44	27	25	52	20
20			42			44	10
21	36	42	52	36	56	58	9
22	39	54	54				
23	40	39	58	47	47	57	5
24	54	65	62	61	63	63	9
25	41	1	53	40	44	56	10
26	19	12	43	22	16	43	11
27	k6	26	59	49	50	61	11
28	31	40	49	44	43	53	9
29	26	35	37	29	27	50	8
30	28	40	53	45	49	58	8
31	30	52	54	34	52	54	6
32	16	19	49	25	24	51	4
33	1	0	51	26	36	45	4

Key: Answer items were multiple choice
Part I: Select the correct name of tool
Part II: Match written work description with illustrated tool
Part III: Match picture of tool with picture which indicates work done by the tool

Table 33

SUMMARY OF HOKE AND RETHERFORD TOOL TESTS

Parts I, II, III

ADMINISTERED AT A SCHOOL FOR THE DEAF

Total Normative Sample Test Results

Part	N	M	SD	Range
I	114	42	10	45
II	114	48	12.5	61
III	114	54	5.3	27

Normative Test Sample Results By Age

Age Groups	N			M			O			Range		
	I	II	III	I	II	III	I	II	III	I	II	III
9 - 14		28		36	39	51	11.6	13.2	5.23	40	55	23
15 - 16		41		38	45	52	7.6	10.6	5.4	37	40	22
17 - 18		23		49	52	56	5.6	3.45	3.0	20	42	10
19 - 20		22		50	58	55	7.6	4.35	4.1	36	16	10

EMPLOYMENT RECORD OF PROJECT TRAINEES
AS OF OCTOBER 15, 1965

Table 34

Subject Number	Job Title	Job Level U	SR	SS	S	Pay Rate W	H	TE	Part Time or Full Time
1	No job placement								
2	Greenhouse worker			X		$26	.65	$130	F
3	Porter	X	X			52	1.31	4446	F
4	Maintenance Man		X			66	1.50	6292	F-2nd
5	Fabricator			X		66	1.65	5432	F-2nd
6	Plant Man			X		50	1.25	2600	F
7	No job placement								
8	No job placement								
9	Upholsterer's helper			X		80	2.00	4940	F-2nd
10	Meat Processor			X		70	1.65	4160	F-4th
11	Production Worker			X		72	1.50	2640	F
12	Production Worker		X	X		132	2.94	6360	F
13	Day Custodian	X				68	1.55	4816	F-3rd
14	Baker's Helper			X		62	1.30	2460	F-3rd
15	Custodian		X	X		60	1.60	3139	F
16	Drill Press Operator			X		80	2.00	3200	F
17	Plant Man			X		66	1.40	2624	F
18	Kitchen Porter		X			54	1.35	4830	F-3rd
19	Nailer			X		72	1.50	577	F
20	Spray Painter, Refinisher				X	60	1.50	3300	F
21	Gardener's Helper	X				60	1.51	1570	F
22	No job placement								
23	Machine Operator			X		54	1.35	432	F
24	Clerk				X	5	.25	110	P
25	No job placement								
26	Dish Machine Operator		X			42	1.20	865	P
27	No job placement								
28	Janitor		X			4	.75	200	P
29	Bus Boy		X			13	1.15	207	P
30	Dish Washer	X				34	1.25	135	P
31	No job placement								
32	Dish Washer	X				-	1.25	24	P
33	Dish Washer	X				41	1.25	165	P

1 U = Unskilled, SR = Service, SS = Semi-skilled, S = Skilled

2 W = Weekly rate, H = Hourly rate, TE = Total Earned. TE includes wages earned on all jobs.

3 F = Full time, P = Part time as of October 15, but engaged in part-time employment as work training

Numbers after F indicate jobs held previously.

TEACHERS RANKING FOR THE VARIOUS CRITERIA

Table 35

Subject Number	Romine			Adler				Hoke			Pickell	
	1	2	3	1	2	3	4	1	2	3	1	2
1	22	28	13	28	31	23	31	31	1	30	19	2
2	6	5	10	5	1	7	2	1	5	11	1	6
3	4	1	9	15	7	4	15	4	7	10	3	13
4	14	12	15	3	27	5	18	7	14	1	10	9
5	24	22	14	10	25	11	28	12	19	12	23	23
6	26	26	24	17	28	15	27	15	15	22	15	18
7												
8	7	14	18	30	16	30	14	29	32	29	18	27
9	10	8	7	12	9	9	20	16	26	13	12	19
10	1	6	4	9	18	10	3	3	6	14	2	7
11	13	32	32	32	30	31	32	32	29	32	26	16
12	27	29	27	7	17	12	12	18	11	23	8	11
13	15	10	3	4	3	3	17	8	2	3	4	3
14	32	21	31	21	21	22	16	19	22	24	16	15
15	8	24	8	13	19	16	23	9	8	5	14	21
16	17	11	5	6	10	6	21	5	9	4	6	5
17	19	18	23	18	29	17	29	26	10	31	29	4
18	16	3	2	1	11	1	25	13	20	6	21	31
19	30	27	30	11	12	8	9	20	12	25	20	25
20	23	9	19	14	4	14	19	14	21	7	22	30
21	21	23	25	8	26	13	22	23	23	28	27	28
22	29	19	21	31	15	32	30	17	16	15	31	22
23	31	13	28	27	20	29	10	10	17	16	13	17
24	5	17	11	23	5	21	13	2	13	2	7	1
25	3	25	20	19	14	20	11	11	4	9	9	8
26	2	30	12	29	8	26	6	30	31	26	25	26
27	20	2	1	2	2	2	1	6	3	8	5	10
28	12	15	29	20	6	18	5	21	30	17	17	20
29	11	31	26	26	23	28	26	22	18	18	11	12
30	28	16	22	16	13	19	24	27	24	19	28	24
31	25	7	16	22	24	24	8	24	25	20	24	14
32	18	4	6	25	22	27	4	25	27	21	30	29
33	9	20	17	24	32	25	7	28	28	27	32	32

Table 36

INTERCORRELATIONS AMONG THE VARIOUS CRITERION RANKINGS BY STAFF MEMBERS

	Adler			Romine			Hoke			Pickell	
	1	3	4	1	2	3	1	2	3	1	2
Adler 1		.95	.14		.43	.44	.62	.47	.61	.49	
Adler 4				.29			.25				.33
Romine 1					.14	.46	.22			.37	
Romine 2						.64	.67	.12	.52	.30	
Romine 3									.58		
Hoke 1								.64	.85	.78	
Hoke 2									.44		
Pickell 1											.66
Pickell 2											

N = 32

Adler 1 - Ability to hold job

Adler 3 - Amount of continuous supportive help necessary to maintain employment

Adler 4 - Amount of improvement on project

Romine 1 - Improvement in social acceptance while on job

Romine 2 - Level of family encouragement and family support

Romine 3 - Social acceptability at termination of training

Hoke 1 - Amount of improvement on project

Hoke 2 - Work-shop task ability at end of training

Hoke 3 - Ability to hold job

Pickell 1 - Amount of improvement on project

Pickell 2 - Classroom performance without continuous support

INTERCORRELATIONS FOR VARIOUS TESTS GIVEN TO PROJECT TRAINEES AND FOR VARIOUS CRITERION MEASURES

Table 37

	Adler*	Hoke	Romine	Pickell	Combined	+
Wais	-.35**	-.29	-.21	-.32	-.37	(30)
Beta	-.37				-.30	(31)
Crawford	.23				.20	(31)
MRMT	.54	.25	.14	.12	.20	(20)
Pursuit Rotor	-.32	-.15	-.11	-.18	-.18	(24)
Bender-Gestalt	.06		.03		.01	(22)
Leiter	.09				.00	(21)
CSWSA Finger Dexterity	-.24				-.09	(20)

* Adler and Hoke - Best to worse in ability to hold a job

Romine - Best to worse in social acceptability at termination from project

Pickell - Amount of improvement while in project

** NOTE: A good rating is a low number while a high number is "good" on all tests except the Crawford and the Minnesota Skill Tests

+ The number of trainees available for each comparison is given in parenthesis to the extreme right in each row

Table 38

A COMPARISON OF VINELAND SOCIAL MATURITY SCALE SCORES WITH BENDER-VISUAL GESTALT TEST SCORES

Vineland S-M Scale				Bender-Visual Gestalt Test		
Trainee	CA	Age Equiv.	Social Quotient	Score	Freq.	% Rank
01	34.9	19.2	77			
02	24.7	21.0	85	35	1	64
03	21.6	19.3	85	16	1	23
04	23.8	19.0	80			
05	21.0	18.7	89			
06	30.1	18.0	72	0	1	4
07	20.3	10.8	53			
08	17.4	9.3	53	59	1	100
09	22.7	21.5	95	42	2	77
10	19.4	19.7	101	30	2	59
11	41.1	24.5	60			
12	21.7	19.8	91	18	3	50
13	48.8	24.0	96			
14	21.1	18.0	89	14	1	36
15	18.7	17.8	95			
16	23.1	19.2	83			
17	40.5	20.0	80			
18	42.5	19.8	79			
19	30.7	21.5	70	30	2	59
20	37.9	18.3	73	10	1	14
21	36.0	18.0	72	14	1	18
22	17.1	15.8	90			
23	26.2	13.5	54	10	1	27
24	30.0	18.0	72	24	1	32
25	23.6	18.3	77	50	2	91
26	21.9	15.5	66	42	2	77
27	32.1	19.2	77	50	2	91
28	30.7	18.2	74	55	1	95
29	18.2	14.7	81	43	1	82
30	21.11	14.7	70	41	1	68
31	21.11	18.3	86	28	3	50
32	19.8	14.1	71	2	1	9
33	23.1	15.5	67	28	3	50
Sum X			2363			
Sum X^2			203991			
X	29.3		77.67			
S.D.			12			